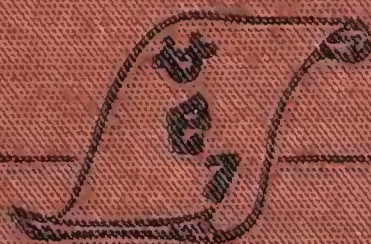


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# MAN *and* HIS RECORDS

by  
Franklin Barnes







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# MAN and HIS RECORDS

UNIFORM WITH THIS VOLUME

---

HOW THE WORLD GREW UP

*The Story of Anthropology*

RACES OF MEN

*The Story of Ethnology*

HOW THE WORLD SUPPORTS MAN

*The Story of Human Geography*

THE TONGUES OF MAN

*The Story of Languages*

MAN AND HIS CUSTOMS

*The Story of Folkways*

HOW THE WORLD IS RULED

*The Story of Government*

MAN AND HIS RICHES

*The Story of Economics*

HOW THE WORLD LIVES

*The Story of Sociology*

THIS MAN-MADE WORLD

*The Story of Inventions*

•

THOMAS S. ROCKWELL COMPANY

*Publishers*

CHICAGO

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*Publishers' Note*

This book presents in popular form the present state of science. It has been reviewed by a specialist in this field of knowledge. An excerpt from this review follows:

*"In his MAN AND HIS RECORDS Mr. Barnes has done a fine piece of work. He has explained the intricacies of the origin and growth of the alphabet in a simple, interesting and truthful way. It is highly gratifying to me that in this book for younger minds there is so dependable an account as one of the most significant phases of the development of human culture."*

---

Signed:       B. L. ULLMAN  
                  Professor of Latin  
                  The University of Chicago





*Many years ago men carved pictures on the stone  
walls of their cave homes*



# MAN and HIS RECORDS

*By*

FRANKLIN BARNES

11

*Drawings by*

BEN STAHL ✓



THOMAS S. ROCKWELL COMPANY

CHICAGO

1931

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## CHAPTER I

### HOW PEOPLE FIRST BEGAN TO WRITE

WHAT a strange world this would be if nobody knew how to write! For then we should have nothing to read. We could not have any books, because men had to learn how to write before they could learn how to print. There would be no newspapers to tell us what is happening every day all over the world. We could not even exchange letters with our friends. We could not know anything except what we heard with our own ears. It would be hard for people to earn their living, because there would be no books to tell them how to do all sorts of things. People would have to live almost like animals.

*Why do people  
write?*

We are so used to reading and writing, and to seeing newspapers, magazines, and books

everywhere we go, that we can hardly realize that there once was a time when nobody could read or write. Even today, in out-of-the-way parts of the world, there are some tribes of people that are like that. When they first meet people who can read and write, they are so surprised and puzzled that they think such people must be magicians.

*Why does  
writing seem  
wonderful to  
savages?*

A man named John Williams, who lived among the tribes in the South Sea Islands many years ago, tells us a story that shows what a wonderful thing writing seems to people who never heard of it before. One day he was building a little house in another part of the island where he lived. He found that he had forgotten one of his tools. So he took a bit of black charcoal and a smooth, thin piece of white wood. With the charcoal he wrote on the wood a message to his wife, asking her to give this tool to the man who delivered the message. Then he handed the piece of wood to one of the natives of the island and told



him where to take it. The native ran all the way, holding the piece of wood tightly clasped in his hand.

When he arrived at the white man's house, he gave the piece of wood to Mrs. Williams. After looking at it a moment, she went and found the tool, which she gave to the man to take back to her husband. This man was never so surprised before in his life. He thought that the piece of wood could talk, although it did not have any mouth. He was sure that there must be wonderful magic in such a piece of wood. So he tied it to a piece of string, and ever afterwards he wore it around his neck. He thought it would bring him good luck.

Another story, very much like this one, is told by people who lived in Africa. A native was given a letter to deliver to a certain white man many miles away. It was a hot day, the messenger was lazy, and he decided to take a nap while he was on his way. So he picked out a nice shady spot by the roadside where

he could lie down and sleep. But first he took care to hide the letter under a big stone. He was afraid that the letter would see what he was doing and tell all about it to the man to whom he was carrying it, and that then he might be punished for being so lazy.

*How many  
letters are in  
our alphabet?*

Writing seems very easy to us, because we have an alphabet of twenty-six letters, and by putting those few letters together in different ways we can write any word we want to, and nobody will mistake that word for any other word. So when we speak of something that is very easy, we say it is as easy as A, B, C.

*How did the  
first people write?*

But people did not learn to make an alphabet until thousands of years after they had been trying to write in more cumbersome ways, mostly by means of pictures. Even today there are millions of people in China who manage to write without an alphabet. A real alphabet was invented only once, nearly four thousand years ago, and all the alphabets in the world today that are used for ordinary writing have

come down from that earliest alphabet. And the invention of that first alphabet was almost an accident, as we shall see later on.

Such a simple thing—and almost an accident! Yet if the alphabet had not been invented the history of the world after that would have been quite different. For the alphabet made the people of Europe go forward much faster, in mastering the earth, than they would have gone without it. Countries whose people had no alphabet did not go ahead nearly so fast as the countries that had an alphabet. If Europe had never had an alphabet, we may be very sure that America would not have been discovered by Columbus, and that we would not have so many things to make life worth while today.

Another thing that is very interesting is that this alphabet, which all of us use every day, and by means of which millions of copies of books and newspapers are constantly being printed, has come down to us, almost as it is now, from the Romans, who lived about 2,000

*What did the  
alphabet do  
for us?*

*From where  
does our  
alphabet come?*



*Did other  
ancient peoples  
have alphabets?*

years ago. It is hard to think of anything else we use in our daily lives that goes back with so very little change to the days of ancient Rome. If Julius Caesar, a great Roman who lived before the time of Christ, could come back to life today and pick up an American newspaper, he would know nearly every one of the letters in the headlines on the front page. Even more ancient peoples than the Romans would find many of the letters of our alphabet very much like certain letters in their alphabets. For our alphabet had its beginning among a people known as the Phoenicians. They were famous traders and merchants who lived in a country on the eastern end of the Mediterranean Sea. The alphabet, although it is so simple and easy to write, is really one of the most wonderful things in the world. We seldom stop to think of all the things that we can do with the alphabet. With those twenty-six little letters we can write any word that ever was spoken in any language in the world—and millions upon

millions more. There are so many different ways you can arrange those letters that if you kept writing them down all your life you would not reach the end.

Now we want to see how it happened, thousands of years ago, that people invented this wonderful thing we call an alphabet. The word *alphabet*, by the way, simply means A, B. The names of these two letters in the ancient Greek language were Alpha and Beta. Put these two names together, cut off the last letter; then we have the word *alphabet*.

*Which Greek letters spell "alphabet?"*

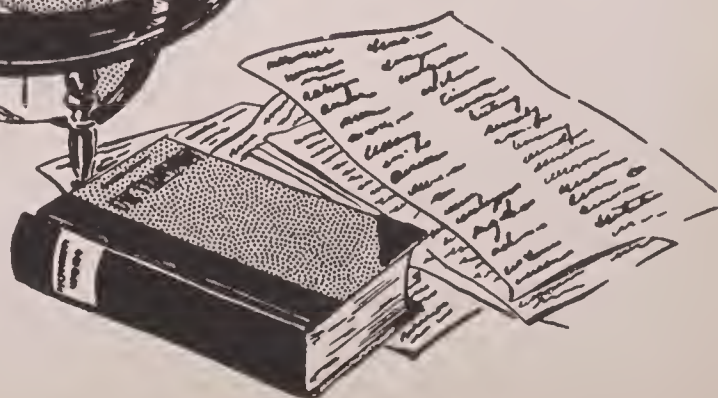
To find out how we got the alphabet, we must first go back many thousands of years to the time when men were just beginning to make life safer and more comfortable.

But how did anyone ever think of trying to write for the first time? In the beginning, when no man could write, no one could teach writing to anybody else. No one had ever even heard of such a thing as writing.

Well, back in the days when men lived in



*With twenty-six letters we  
can write any word*



*Why did  
early man  
draw pictures?*

caves and wore the skins of wild animals for clothing, there were three things that men could do; three things which no other creature had ever thought of doing. First, they could build fires; second, they could make tools; and, third, they could draw pictures. They really did not need to draw pictures, although they did need to build fires and to make tools. But they liked to draw pictures, just as little children today do. It is a sort of instinct, something a person does because he wants to, and not just because he has been told to do that thing. It is a part of the instinct of imitation; that is, to copy things in the world about us. Animals such as monkeys like to imitate acts that they see being done, but no animal can draw pictures of acts or things.

If we go into very old caves in France and Spain we find painted on the walls, pictures of the animals that the men who lived there many thousands of years ago, in the time known as the Stone Age, used to hunt. There are pic-



tures of bison, deer, mammoths (great animals much like elephants), and other animals, as lifelike as if someone had just painted them. We also find scratched on pieces of bone, little engravings of various animals and of the men who hunted them.

In Australia and in South Africa to this day there are tribes of people who live much the same kind of lives as did those men of the Stone Age in Europe. These people, too, like to paint pictures on the rocks, although they cannot read or write or do hardly anything else that civilized people can do.

Why did these people who lived in caves, so many thousands of years ago, want to draw pictures of the animals they hunted? As we have seen, they made pictures by instinct; that is, they simply wished to do so. Perhaps it was because someone in the tribe liked to draw, or because they liked such pictures on the walls of their caves. Or again, perhaps one day one of the hunters had killed a great animal which

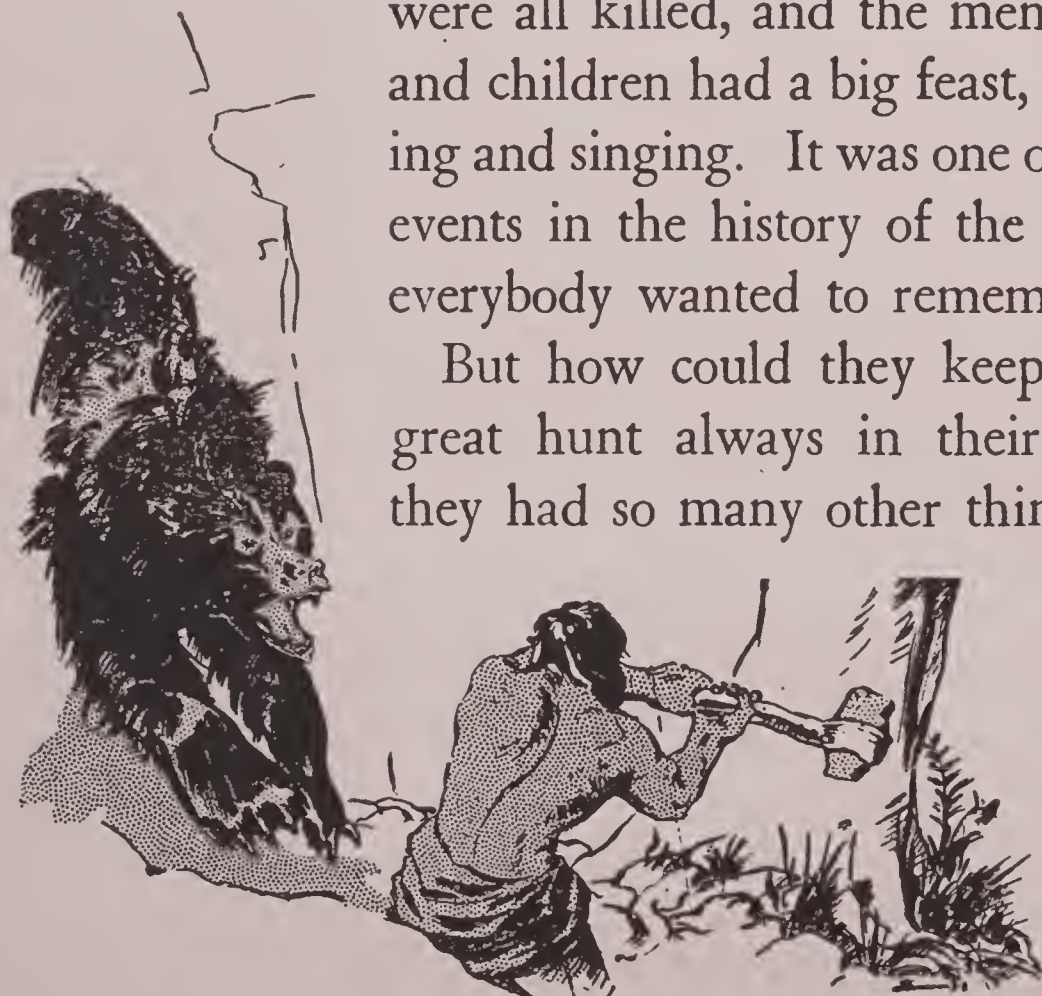
*What did people  
draw pictures of?*

was a little larger than any they had ever brought into the cave before. Then it would only be natural that they would want to keep the memory of such an animal and of such an event. So someone would draw a picture of the animal on the wall of the cave.

*Did the  
pictures  
mean anything?*

Perhaps some day the tribe would hold a big hunt. Maybe they found a herd of mammoths or of bison, and the men had to fight with their clubs, their bows and arrows, and their axes as they never fought before. Some of the men perhaps had narrow escapes from being killed when the angry animals rushed at them. But the mammoths or the bison finally were all killed, and the men with their wives and children had a big feast, with much shouting and singing. It was one of the most famous events in the history of the tribe—a day that everybody wanted to remember.

But how could they keep the story of the great hunt always in their memories when they had so many other things to remember?



*Some of the men had  
narrow escapes from  
being killed by wild  
animals*

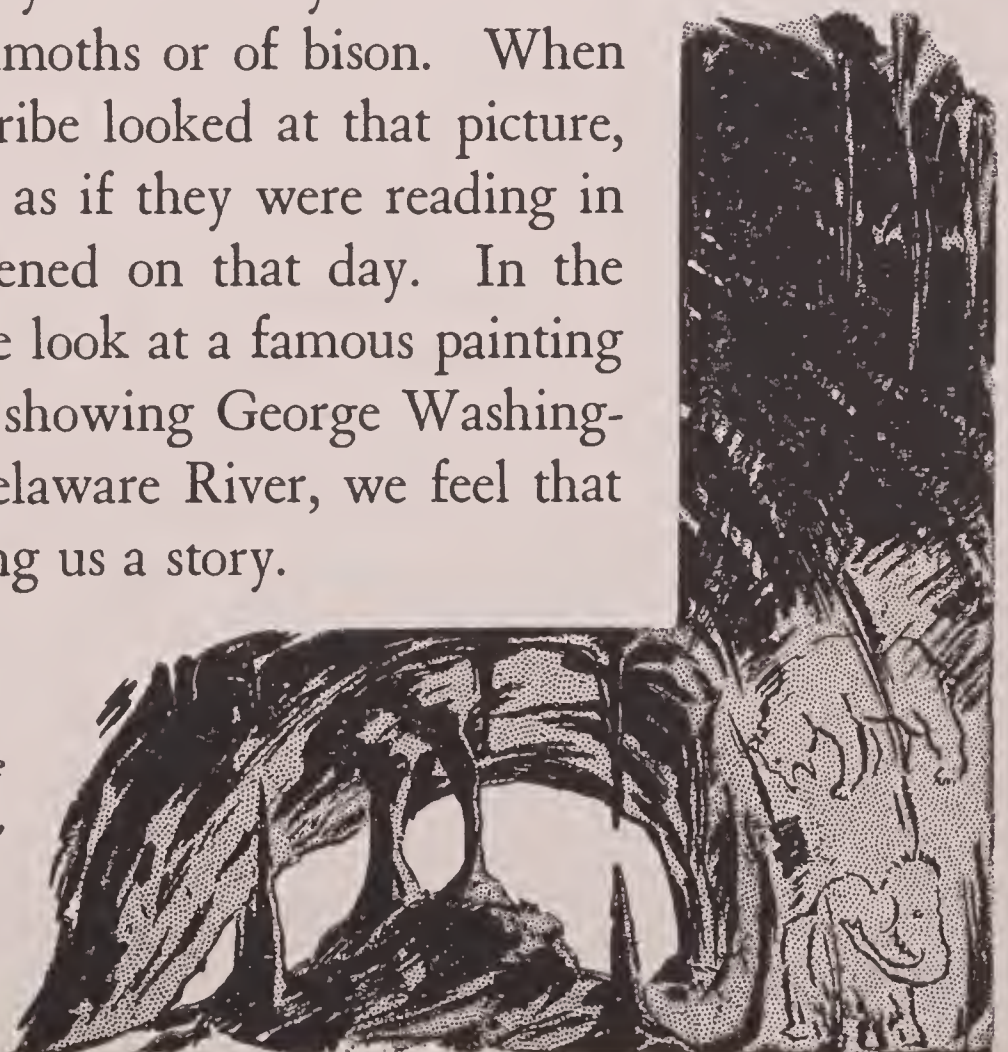


They must have something to remind them of that famous day. A picture of the hunt would do just that. So the man in the tribe who could draw the best would be asked to make a picture of the great hunt, perhaps on the smooth side of a stone cliff. He might have other men helping him on the job. They would mix some paint out of colored clay, or make a rude crayon out of a piece of charcoal. Then they would sketch the picture on the rock.

*With what  
did they draw?*

So they now had a picture that would probably last for many years. It was a story without words, that would always remind the tribe of that glorious day when they hunted the great herd of mammoths or of bison. When the people of the tribe looked at that picture, it would be almost as if they were reading in a book what happened on that day. In the same way, when we look at a famous painting today, like the one showing George Washington crossing the Delaware River, we feel that the painting is telling us a story.

*They would mix some  
paint out of colored clay,  
or draw with charcoal*





*Did the early  
men keep  
other records?*

But pictures were not the only things that early men depended upon to keep their memories fresh. There was another way they had of refreshing their memories. They used this more in the way that we use numbers. It was a kind of arithmetic. They might want to remember how many men had been killed in a certain battle, or how many animals had been slain in a great hunt, or how many furs the tribe had on hand for trading. They could keep records like this by tying the right number of knots in a piece of string, or by making the right number of notches in a piece of wood or nicks in a stone. Sometimes nowadays a person will tie a knot in a handkerchief or fasten a piece of string around his finger to remind him to do something.

But making records in that way was not a step on the road to real writing. The trouble was that it was so easy to forget what the knots or the notches or the nicks really meant, after a long time had passed. In fact, nobody ex-

cept the man who made them might ever know what they meant. But usually everybody could see what a picture meant, even a long time after.

So for thousands of years men kept drawing pictures to remind them of important things that they wanted to remember, or that they wanted their children and grandchildren to know about. Now as long as the pictures were very simple ones, it was easy to see what they meant. But when people began to get more civilized, it was not so easy to put into pictures everything that they wanted to remember. They wanted to remember thoughts as well as things. There was a great chance they might make a mistake when they tried to put thoughts into pictures. Then, too, even the most carefully drawn picture might tell one story to one man and another story to another man.

*What drawbacks*

In fact, it was sometimes very hard to draw a picture of some actual person or thing so that everybody would know what was meant. Take, for instance, the word *enemy*. Now

an enemy is usually a man, but a certain kind of man. And, of course, it was quite a problem to draw a picture that would stand for a thought or an idea, such as "eating."

*How did  
the American  
Indians write?*

Let us see how such problems were solved. The American Indians used to do a lot of writing by means of pictures. When an Indian drew a picture of an arrow, it meant an enemy, because an enemy was a person who shot an arrow at you. When he drew a picture of a piece of corn-cake in a man's mouth, that meant eating. So these particular drawings were not just pictures. They stood for something else than the actual things of which they were pictures. They were idea-signs. Of course, everybody had to agree that those pictures should be read in just that way. That was how people first began to learn to read.

*Were their  
methods  
successful?*

But there was still no way of drawing something that would stand for just a sound. How in the world could a picture be made to mean a certain sound? And yet, there were some





*The American Indians wrote in a picture language  
on their tepees and wigwams*

words that it was very hard to write, even by means of the pictures that we call idea-signs. Among these would be words like *I* and *you*, *soft*, *hard*, *loud*, *good*, *bad*, and so on.

*Do two  
different words  
ever have the  
same sound?*

Now it happens in all languages that two different words will have the same sound. In English we have *eye* and *I*, *yew* and *you*, and many others.

Did you ever play the game of *rebus*? In that game we make a picture of a certain thing stand for the sound of another word. We can write *I* by drawing a picture of a person's eye. We can even write a whole sentence, like *I see you*, by means of three pictures: an eye, a large body of water, and a yew tree.

*Was the  
game of rebus  
valuable to us?*

We think of that sort of thing as a kind of joke, and that is probably how this scheme first began to be used by people who were trying to find a better way to write. But it was a very important step on the road that led to the invention of the alphabet; that is, certain signs which stood only for sounds, the same sign



meaning the same sound—a consonant or a vowel—when used in all sorts of different words. First, a certain sign would stand for the sound of a whole word or a part of a word, called a syllable, but finally it came to stand for just the first sound in a word, such as *b* in *box*. Then that sign could be used in spelling any other word that began with *b* or that had *b* anywhere in it, and there would be other signs for the other sounds.

So we see there were four steps leading up to the alphabet. First, there was a picture of a thing itself, such as a horse or an elephant. Second, there was a picture that stood for something else, such as an arrow for an enemy. Third, there was a sign that stood for the sound of a whole word, which might be a very long word, or for a part of a word, called a syllable. Fourth, there was a sign that stood for just a single sound, like *d*, *l*, *r*, *a*, or *u*. If you had enough of the signs of this last kind, you could write any word you wanted to, very

*How many steps  
led to our present  
alphabet?*



quickly and easily, and everybody could read it quickly and easily, and would know from the sound just what word it was.

After the first three steps were taken, it would seem to us as if people would just naturally take the fourth step without any waiting, and throw away picture writing altogether. How much easier and pleasanter it would be to use just these little sound-signs, called letters.

*Why was not  
the alphabet  
invented sooner?*

But, strange as it may seem, some of the greatest peoples in ancient times, though they came close to using an alphabet, never could free themselves altogether from the old picture writing. They had become so used to writing by means of picture-signs, idea-signs, and sound-signs, all mixed up together, that they could not forget the habit and begin using an alphabet instead. So they went on writing in that way until long after the alphabet had been worked out by a people who were looking for a quick and easy way of writing.

## CHAPTER II

### THE WRITING OF THE AMERICAN INDIANS

WRITING by means of pictures has been tried by almost all peoples and in all parts of the world at one time or another. People living thousands of miles away from each other, in different parts of the earth, have tried to write that way. The American Indians were very skillful in this kind of writing. We can still see many of their picture writings on large rocks in various parts of the country.

On a large surface of rock along the shores of Lake Superior there is a very famous Indian picture. It tells the story of a journey across the lake by a party of Indians led by a chief named The Wolf. The chief is shown by a picture of him, riding on a horse. Then there are five canoes, and the number of men in each

*How many nations tried to write by drawing pictures?*

canoe—there are fifty-one men in all—is shown by a line of little straight marks on each canoe. There was another chief in the party, a friend of The Wolf. He was named The Kingfisher. The kingfisher is a kind of bird, and this chief is represented by a picture of that bird.

*How did the  
Indians use  
nature signs?*

The number of days that the journey took is made plain by the drawing of three arches and three disks under them. That means that the sun crossed the sky three times while the men were on their journey. Then there is a picture of a turtle, a land animal. This means that the party landed safely at the end of the journey. The story is told, you see, partly by actual pictures of things, such as the canoes, and partly by idea-signs, like the turtle, which does not mean a turtle but means land.

Many of the Indian tribes had a curious sort of picture writing, in which the pictures were not drawn or painted but were worked out in shell beads fastened on a belt. These wampum belts, as they were called, were made of bark,



*The story was told in drawings*



hemp, or strips of deerskin sewn together with sinews or hemp fibers. On these belts the Indians stitched beads of shell in various patterns so as to make pictures or designs. There were black beads, dark purple beads, and white beads. The white beads were the ordinary wampum, while the dark beads were worth twice as much.

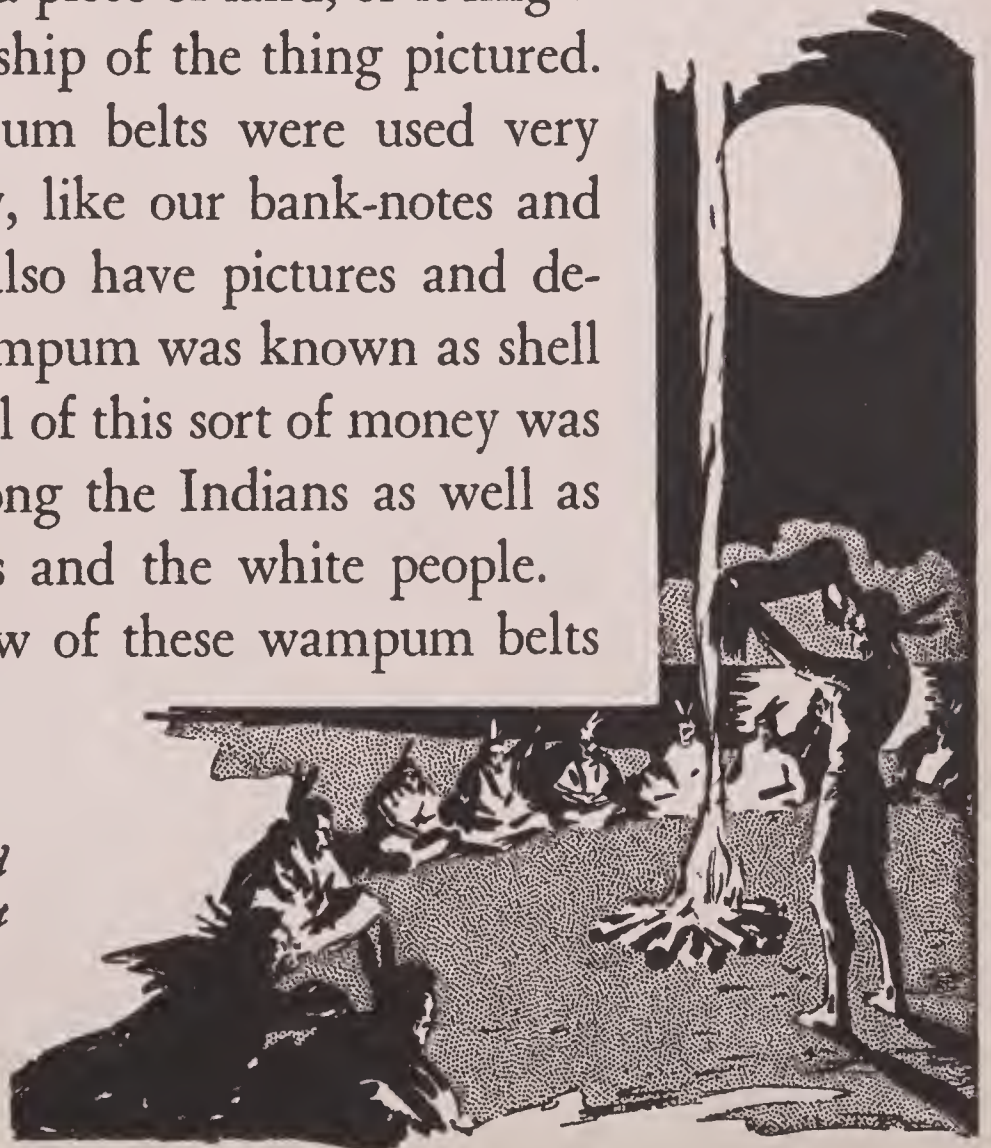
*How were  
wampum  
belts used?*

Wampum belts were used as records of important events. A certain wampum belt might tell about a treaty between one tribe and another, or between the Indians and the white men. A wampum belt might even be a record of the boundaries of a piece of land, or it might be a claim to ownership of the thing pictured.

Then, too, wampum belts were used very frequently as money, like our bank-notes and dollar bills, which also have pictures and designs on them. Wampum was known as shell money. A great deal of this sort of money was used in trading among the Indians as well as between the Indians and the white people.

There are very few of these wampum belts

*Wampum belts were used  
as records of important  
events*



*Where is a  
famous wampum  
belt today?*

left now. But sometimes you can see one of them in a museum. In the city of Philadelphia there is kept a very famous wampum belt. It is so interesting that we must look at it and find out what it has to tell us. It was given by the Iroquois Indians to the good Quaker, William Penn, who founded the colony of Pennsylvania, which is now one of our great states. This wampum belt was meant as a record of the friendship between the Indians and William Penn. On this belt there are eighteen strings of white wampum. In the center there are pictures, made of dark beads, of two men with their hands clasped. One is an Indian and the other is a white man. We know which is the white man, because he wears a hat; the Indians did not wear hats. Then there are three slanting bands across the belt. They represent the rafters of the Indians' "long house," the center of tribal life, and they mean the league of Iroquois tribes.

By means of their pictures and idea-signs the

Indians could write letters to each other. They used strips of birch-bark for paper.

Another use that the Indians had for writing was to make a record of their songs. They did this by drawing on a piece of birch-bark a series of pictures which would remind the singer of the things mentioned in the song, the pictures being arranged in the right order.

Besides this picture writing, the Indians also knew how to keep accounts by tying knots in cords and cutting notches in sticks. In that way they could keep track of the number of days a party spent in traveling, and make records of how much one person owed another.

The Peruvian Indians in South America also used knotted cords a great deal. Such a cord was called a *quipu*. There was a main cord; on this main cord there were fastened, at certain distances apart, thinner cords of different colors, knotted in all sorts of ways. Each color stood for something different. For instance, red meant soldiers, yellow meant gold,

*How was cord  
used to keep  
records?*



white meant silver, and green meant corn. A single knot stood for 10, two single knots stood for 20, a double knot stood for 100, and two double knots stood for 200.

*Were they  
satisfactory?*

The Peruvians actually used these *quipus* for ordinary writing. The government depended upon them for recording the laws and for sending messages from one part of the Inca Empire to another. The story of a man's life would be recorded on a *quipu*, and when he died, the *quipu* would be buried with him. But it was very hard for most people to read the meaning of a *quipu*. *Quipus* were useful for keeping account of sums, but they were a very poor way of trying to write. It was necessary to have a special class of men, trained for the job, to make the important *quipus* and to tell what they meant after they were made.

*Who were  
the Mayas?*

In Central America and in Mexico there lived two other Indian peoples who had gone a long way toward civilization. They were the Mayas and the Aztecs. They had a very fine system

of picture writing. They had actually reached the point, like the Egyptians and some other peoples of the Old World, where they had signs standing for sounds. They came very close to inventing an alphabet. But they never did so.

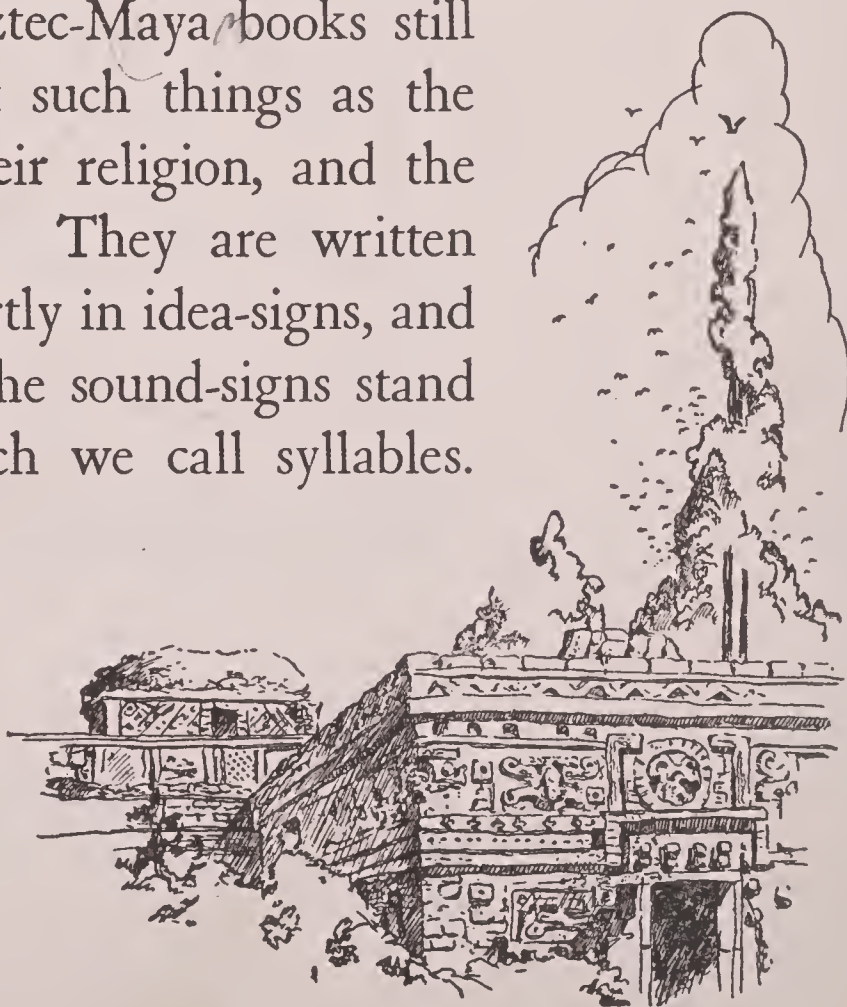
These people used to write in bright colors with a feather pencil. They had a sort of paper made from the leaves of the *maguey* plant. They used this paper for common writing. But for more important records they used cleaned and polished skins. They also carved inscriptions on the walls of their temples. Only ruins are left of their temples, and most of their books were destroyed by the Spaniards.

But there are some Aztec-Maya books still left. They tell us about such things as the history of the people, their religion, and the bringing up of children. They are written partly in picture-signs, partly in idea-signs, and partly in sound-signs. The sound-signs stand for parts of words, which we call syllables.

*How did they write?*

*Did they leave records?*

*They carved inscriptions on the walls of their temples*



## CHAPTER III

### THE CHINESE WAY OF WRITING

*Did the  
Chinese invent  
a way to write?*

CHINA is a large country and a very old country. Hundreds of millions of people live there. Many centuries ago they invented a kind of writing. It is one they still use, for the Chinese people were cut off from the rest of the world for a very long time, and besides, they like to do things just as their forefathers did. When they finally learned about the alphabet from other people, they were so used to writing in the old way that they could not change.

Probably the very first way that the Chinese had of keeping records was by means of knotted cords like those used by the Peruvians. They also made notches in wooden or bamboo sticks, and they made nicks in stones. But they soon went on to picture writing.

At first, they made real pictures of such things



as the sun, a fish, a horse, and a man. But the Chinese were becoming a very civilized people and they had many books to write. So they had to make the pictures more quickly, and then the pictures did not look so much like the real things. A little circle with a dot in it meant the sun; three sharp points meant mountains; a round hole meant the mouth; a stem with five branches meant the hand.

*What was their method?*

In order to make signs for things that could not be shown by a single picture, two pictures would be joined together. The sun and the moon together meant bright; two hands, joined, meant friendship; a woman under a roof meant peace; an eye and water meant tears. In the same way, an ear between two doors meant the verb *to listen*.

But even this arrangement did not make it possible to write every word so that its meaning would be perfectly clear. It happens that in the Chinese language the same word may mean many different things. You tell which

THIS

TREE

GIVES

FIREWOOD

此  
木  
為  
柴

*The Chinese drew pictures instead  
of writing words*

What form  
did they  
finally use?

thing a word means by the tone of voice that is used in speaking the word, just as if we should sing words instead of pronouncing them as we do. So the Chinese had to find a way of showing the different meanings of the same word when it was written. They found the answer to this problem by using the *rebus*, which we were talking about a little while ago. So they began writing signs that stood for sounds.

Let us take the Chinese word *fang*. This means many different things, depending upon the way in which you use it. It means square and also nine other things. The sign used in writing the word *square* was a picture of two boats tied together. One of the other meanings of *fang* was *place*, or *location*. To write this word, the Chinese writer put down the sign for *square*, but he added to it another sign meaning earth. Then one of the signs gave the reader the sound of the word and the other gave him its meaning. Other meanings of the word *fang* were shown by adding to the first

sign, the sign for a door, which meant a room; the sign for words, which meant the verb *to ask*; and so on.

Another example is the word *chow*. It means a ship and various other things, such as fluff, flickering, basin, and talkativeness. In order to write these other words, the sign for ship would be put down, joined with other signs. A pair of feathers meant fluff, fire meant flickering, water meant a basin, speech meant talkativeness. The sign for ship every time simply stood for the sound of the word.

So the Chinese had three ways of writing words: by picture-signs, by idea-signs, and by sound-signs. They went on using the three ways, side by side, for many hundreds of years.

There was another reason why the Chinese clung to their cumbersome writing. China is a very large country and the people in different parts of it do not talk just alike. If, in writing, the words were spelled out just as they sound, all the people would not understand

*What were their  
three ways  
of writing?*



them. But they can all read the picture-writing. The result is that a man from one part of China when he cannot understand the spoken words of a man from another part of China, can talk with him by writing on a slip of paper.

*How old is  
Chinese  
writing?*

Just how old the Chinese writing is, we do not know for sure. But we have samples of it, carved on rock, that are nearly 4,000 years old. Of course, the shape of the different signs has changed a good deal in that long time. The Chinese language is a very, very hard one to learn to write. Instead of learning a little alphabet of twenty-six letters, like ours, a Chinese student has to learn about 40,000 different signs.

*Who were the  
first printers?*

Now, although the Chinese are the most old-fashioned people in the world in their way of writing, they were the first people who learned how to print. They printed books hundreds of years before books were printed in Europe and America. They also knew how to make paper long before our forefathers did. They wrote

with brushes of fine hair dipped in ink. They did not write from side to side, as we do, but in tall columns, with one sign below another.

The Japanese learned how to write from the Chinese. They, too, have gone on writing in their own way. But they had to make many changes in the writing that they got from China, because the Japanese language is quite different from the Chinese. The Chinese language is made up of short words of only one syllable, while the Japanese language is made up of longer words of several syllables. The Japanese use some of the Chinese picture-words and idea-words, but they write mostly with sound-signs, each sign standing for a syllable of a word. There are fifty of these sound-signs, making it easier to write in Japanese than in Chinese.

In recent years both the Chinese and the Japanese have been trying to write their languages with our alphabet. But they find it very hard to do so, because they have become so accustomed to the old-fashioned way of writing.

*How did the  
Japanese learn  
how to write?*

*What method  
do they use?*

## CHAPTER IV

### WRITING IN ANCIENT EGYPT AND BABYLONIA

*How old is  
the Egyptian  
Race?*

JOURNEYING thousands of miles across Asia we finally reach Africa. Egypt is an interesting country lying in the northeast corner of that continent. Through the land of Egypt, for about a thousand miles, flows the river Nile. There is no rain in Egypt, but every year the Nile overflows its banks. The water spreads out for miles on each side and enriches the soil. Then the land becomes alive with fields of growing grain. The valley of the Nile is like a broad green ribbon, hemmed in by the yellow sands of the great desert.

The Egyptians, like the Chinese, are a very, very ancient people. Their history goes back about 7,000 years. Egypt was at one time the greatest kingdom in the world. The Egyptians



built stately temples and great tombs for their kings. Some of these tombs, known as pyramids, can still be seen in that country. The Egyptians were a civilized people; in fact, they were the most civilized people in the world thousands of years ago.

Of course the Egyptians knew how to write. To us, their writing looks very strange, stranger even than Chinese. It was very beautiful writing, but writing in the Egyptian way took a great deal of time and effort. One had to be a very skillful artist in order to write in that way.

Our study of Egyptian writing is very important, because we are now for the first time getting on the trail that led finally to the invention of the alphabet. But the Egyptians themselves did not invent the alphabet.

The Egyptians were very fond of carving stories of the great events in their history and in the lives of their kings, and stories about their gods, on the walls of their beautiful temples

*Did the Egyptians  
know how  
to write?*

*How did  
they write?*

and palaces. These carvings were made with chisels. Many of these walls, covered with carved inscriptions, are still standing. They also painted many inscriptions on the coffins of their kings, called pharaohs, and other important people. The Egyptians were very anxious to preserve the bodies of their dead. They very carefully embalmed the bodies and made them into mummies.

*Did they  
write books?*

The Egyptians wrote many books. They were not like our books; they were strips of paper many feet wide, which were rolled up when not in use. This paper that the Egyptians used was made from strips of the papyrus, a water plant that grew on the banks of the Nile. Papyrus was not made in the same way as our paper. But the word *paper* comes from the word *papyrus*. The climate of Egypt is so dry that many sheets of this papyrus paper, covered with Egyptian writing, have been found buried in the sands, almost as fresh as when it was first made, thousands of years ago.

The Egyptians had three kinds of writing. They differed only in the way the words were formed. The first kind was called *hieroglyphics*. It was used for the inscriptions that they carved on the walls of the temples and palaces. The second kind was easier to write. It was called *hieratic*, and it was used for important writing on papyrus rolls. The third kind, known as *demotic*, was used for ordinary writing, such as personal letters and business records. This was still easier to write. But all Egyptian writing is very beautiful, especially the *hieroglyphics*. The Egyptians valued their writing for its artistic beauty almost as much as for what the writing meant.

Although the Egyptians lived thousands of miles away from China and had no acquaintance with the Chinese people, their scheme of writing was like that of the Chinese, but it did not look at all like Chinese writing. Egyptian writing consisted partly of picture-signs, partly of idea-signs, and partly of sound-signs.

*How many kinds  
of writing did  
they have?*

*The Egyptians had three kinds  
of writing*

TRANSLATION		
OSIRIS THE MATRON SINGER OF	OMON- RE KING OF THE GODS	ISTY

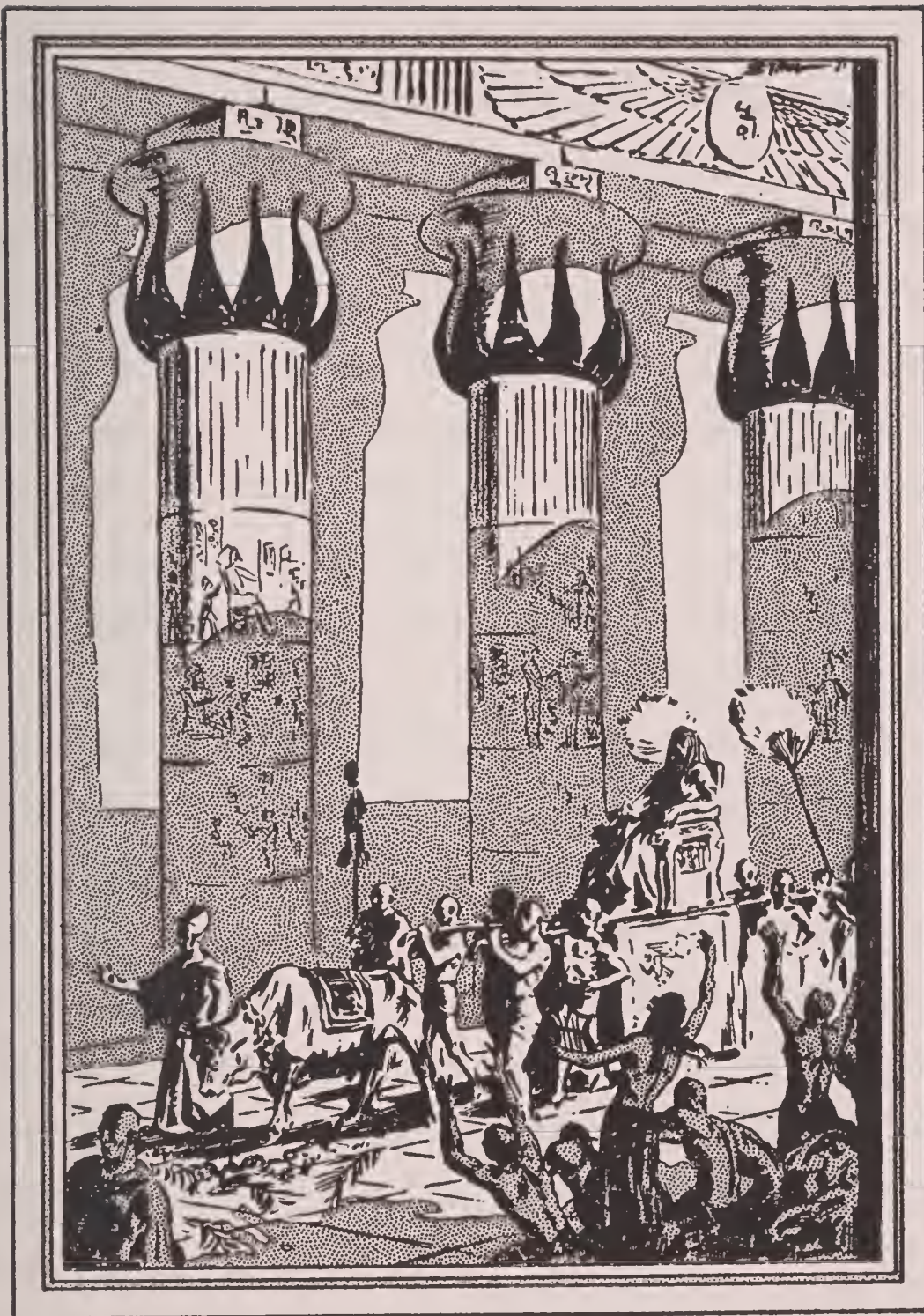




*When did the  
Egyptians learn  
how to write?*

Just when the Egyptians learned to write is not known. But it was very, very long ago. Egyptian writing is older than Chinese writing. Nearly 7,000 years ago the Egyptians were writing in hieroglyphics and were using picture-signs, idea-signs, and sound-signs. There were about 1,700 of these signs. The hieratic writing we can trace back about 5,500 years, and the demotic writing nearly 3,000 years.

The Egyptians probably started this writing with simple pictures. To make a picture of some familiar object, such as a chair or a house, was very easy, and everybody would know what it stood for, without having to ask questions. But we have already seen that it is impossible to draw a picture of *hot* or *cold*, *good* or *bad*, and words like that. So the Egyptians, like the Chinese, had to invent idea-signs, in which the picture does not stand for the thing shown in the picture, but for an idea which the picture suggests. When the Egyptians wanted to write the word *busy* they made a picture of a bee, for



*The Egyptians were highly civilized and took great pride in their writings*



the bee is a very busy insect. In the same way, a picture of a roll of papyrus meant knowledge, because books were made of rolls of papyrus. A picture of a calf running toward some water meant thirst, and a picture of a whip meant power.

*Why did they  
add other signs  
to their pictur  
writing?*

But here again it was not always possible to make the meaning perfectly clear. So another sign was sometimes added, just as in Chinese writing, the other sign standing for the sound of the word.

To show just how sounds were written in Egypt, let us take the name of a very beautiful stone, out of which the Egyptians loved to make necklaces and other kinds of jewelry. It is a blue stone which we call *lapis lazuli*. In the Egyptian language its name was *khesteb*. Now the Egyptian word meaning to stop was *khesf*, and the word for pig was *tep*. These two words, put together, sounded almost like *khes-teb*; so the word for lapis lazuli was written with a picture of a man holding a pig by the tail.



The Egyptian word for mouth was *ro*. The written sign for it was shaped like a human mouth. But this sign could be used for the sound *ro*, or even for the letter *r*, in any other word.

The Egyptians had about four hundred sound-signs standing for words or syllables. About twenty-five of these were used like our alphabetic letters. But they were all mixed up with picture-signs, idea-signs, and sound-signs standing for words and syllables. The Egyptians then might easily have thrown away the old, cumbersome way of writing and used only an alphabet. But they loved their beautiful old picture-writing too well to give it up. So they went on using all the different kinds of signs until long after the alphabet had been invented by a neighboring people. Then Egypt was conquered by other nations and the Egyptians finally forgot their ancient writing. In fact, for nearly two thousand years nobody knew how to read the old Egyptian writing.

*Why was their  
writing difficult  
to read?*

It was only about one hundred years ago that a key to unlock its secrets was finally found.

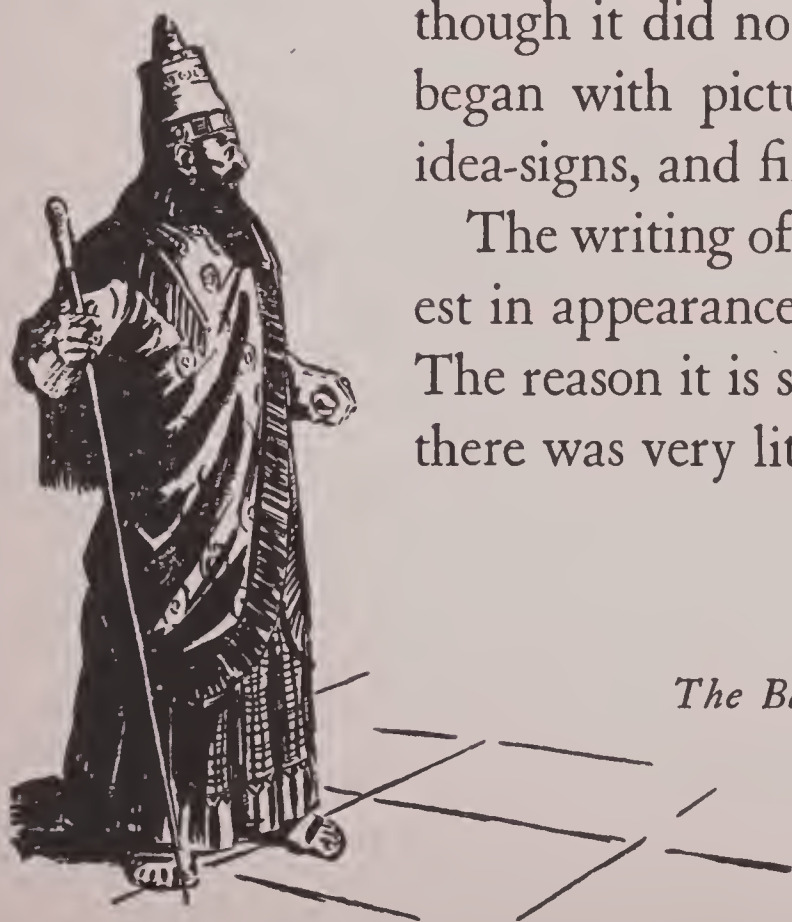
*Who were the Sumerians?*

At the time that the Egyptians were carving their hieroglyphics on the walls of the temples along the Nile, there was another great people, living over toward the east, in Asia, who also had learned how to write. These people were the Sumerians. Their country was the land between two rivers, the Tigris and the Euphrates. After it was conquered by the people called the Babylonians it became one of the greatest empires of the ancient world.

Now, the writing of the Sumerians and Babylonians was based on the same plan as the writing of the Egyptians and the Chinese, though it did not look like either of them. It began with pictures of things, then it added idea-signs, and finally sound-signs.

The writing of Babylonia is one of the strangest in appearance that the world has ever seen. The reason it is so peculiar is that in Babylonia there was very little stone and no paper. Most

*The Babylonians lived in Asia*



of the writing was pressed into the surface of soft clay tablets or cylinders which later were baked until they became very hard. So hard did they bake these clay tablets and cylinders that thousands of them have been found buried in the ruins of the cities of Babylonia, and the writing is still clear and sharp.

Of course, when the Babylonians had to do their writing on soft clay, they could not use a pen or a pencil or a brush. They used a rod made of a stiff reed or of metal, and with one end of it they stamped marks in the soft clay. As the marks that they made were sharp like a wedge, we call their writing *cuneiform*, which means wedge-shaped. They grouped these wedge-shaped marks in all sorts of ways.

Now, it was very hard to make pictures by means of these little wedge-shaped marks; that is, pictures that looked at all like the things they stood for. But we can still see, in the way that the marks are arranged, that many of the signs were once real pictures. For instance,

*Who used the  
cuneiform  
method of  
writing?*



the sign which means the sun was made with four wedge-shaped marks arranged in a square, because they could not make a circle with these marks. In the signs for a star, a hand, a dagger, a reed, corn, and so on, we can see that these were meant for real pictures of those things, although they came to look less and less like them as writing was done more rapidly.

Idea-signs, too, were freely used in the cuneiform writing, along with the picture-signs, and finally sound-signs were added, just as in Egyptian and Chinese writing. In fact, the Babylonians used more and more of the sound-signs standing for words or syllables, until a time came when all the writing was in sound-signs.

*Did the  
Babylonians in-  
vent an alphabet?*

Here again, it would have been the easiest thing in the world to make out of these sound-signs a real alphabet of single letters, and then use only the alphabet for writing. For the Babylonians had already, as we have just seen, given up the old picture-signs and idea-signs. But even that little step was too much for them

to take, because they had got into the habit of using the sound-signs for words and syllables.

This queer wedge-shaped writing was used for many centuries. The Assyrians, when they conquered Babylonia, took over this writing and used it themselves. Then, when the country was conquered by the Persians, they, too, began writing in the cuneiform signs. But when the Persian Empire fell, the wedge-shaped writing was forgotten and nobody wrote it any more. The secret of the funny little wedge-shaped marks was lost for hundreds of years.

*When did the  
Cuneiform  
method die?*

But at last some wise men found the key to the Babylonian writing, just as they found the key to the Egyptian writing. Now the world can read the thousands of clay tablets and cylinders that are being dug up out of the ruins of ancient cities in Babylonia, and we are learning a great deal about the kind of life the people lived in the land between the Tigris and the Euphrates in those far-off days when the world was young.

*Can we read this  
ancient writing?*

## CHAPTER V

### HOW THE ALPHABET WAS BORN

*Why was not  
the alphabet  
discovered before?*

EGYPTIANS and Babylonians, as we have seen, came very close to writing with a real alphabet, but they never took the last short step that would enable them to do so. The good old ways of writing, as handed down by their forefathers, had too strong a hold on the people. They could not give them up for something different.

But the idea of an alphabet was there, in both the Egyptian and the Babylonian writing, waiting for somebody to see it and put it to work. So it happened that the alphabet was given to the world by a people who knew both the Egyptians and the Babylonians, but who had no old-fashioned way of their own that they hated to give up. They saw how clumsy the Egyptian and Babylonian writing was, and



they wanted a quicker and easier way. But the sound-signs in those two systems of writing gave this other people, we now believe, the hint that led them straight to the invention of a real alphabet.

We do not know just when the alphabet was invented. It may have been as long ago as nearly 2000 B. C. The people who invented the alphabet were Semites who lived in southwestern Asia. Explorers have found some of their writing carved on rocks in ancient turquoise mines in the rocky peninsula of Sinai at the head of the Red Sea, between Egypt and Palestine. Some time later, this alphabet was taken and changed by the Phoenicians, a Semitic people who lived along the coast of the Mediterranean Sea north of Palestine. The alphabet that they used consisted of twenty-two signs. We know a good deal about these signs. They were not picture-signs or idea-signs or sound-signs of words or syllables. They were just letters, like the letters of our own alphabet, except

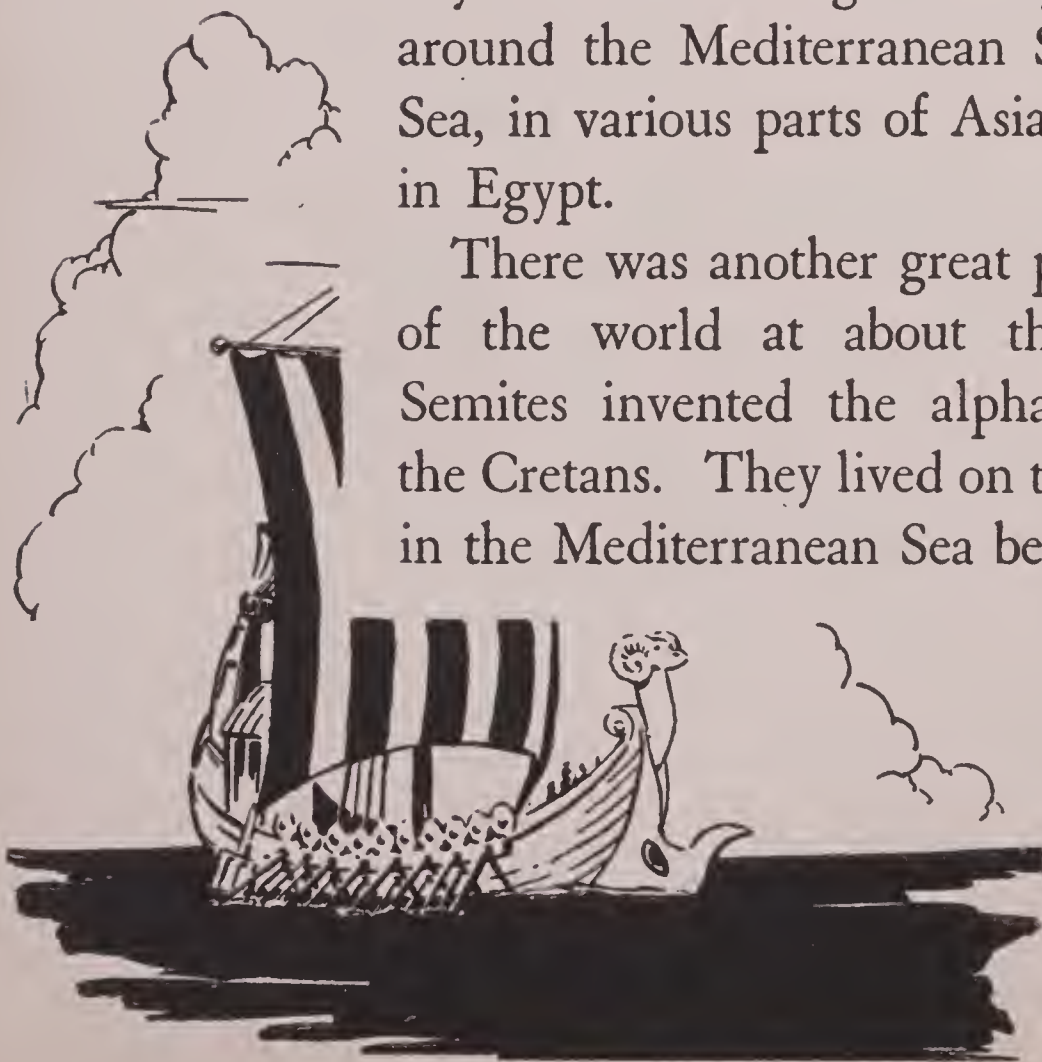
*Who invented  
the first  
alphabet?*

that they were only consonants, such as our letters B, D, K, M, S, T, and others.

*Who were the  
Phoenicians?*

We must find out a little more about these Phoenicians, and see why it was that they wanted a way of writing that was quick, simple, and easy to read without making mistakes. The Phoenicians were one of the most interesting people of the ancient world. They were merchants, whose ships carried cargoes of valuable goods to and from all the ports of the Mediterranean Sea. They had great cities in their own country, such as Tyre and Sidon, and on the coast of Africa they built a splendid city named Carthage. They had colonies all around the Mediterranean Sea, on the Black Sea, in various parts of Asia Minor, and even in Egypt.

There was another great people in this part of the world at about the time that the Semites invented the alphabet. They were the Cretans. They lived on the island of Crete, in the Mediterranean Sea between Greece and



*The Phoenicians were  
merchants and traded  
with many countries*

Egypt, and had colonies on the near-by coasts. They, too, knew how to write, but the secret of their writing has been forgotten, and we do not know how to read the samples of their writing that we find. It is possible that the Phoenicians got from the Cretans some hints about writing, but we cannot be sure about it. But the more we study the matter, the surer we become that the Phoenicians owed a great deal to the Egyptians in learning to write. Some of the letters in the Phoenician alphabet look strangely like some of the Egyptian signs that stood for sounds, and a few look like certain cuneiform signs.

As we have said, these Phoenicians were famous traders. They were what we would call, nowadays, *business men*. They were not a people who had great kings and emperors and built magnificent temples and palaces like the Egyptians and the Babylonians. They were very busy people, and they did not have time for slow, cumbersome writing, no matter

MEM



SHIN



GIMEL



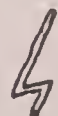
ZAYIN



YOD



LAMED



QOPH



SAMEKH



*Some of the letters in the  
Phoenician alphabet resembled  
those of other nations*



how beautiful it might be. They needed, for their business, a way of writing that would not take much time and that everybody could understand easily.

*Why did the  
Phoenicians need  
an alphabet?  
did pictures have?*

The chief use that they had for writing was probably the marking of labels on shipments of goods that they sent in their ships from one port to another. On a little label there was not much room; it was simply impossible to write anything on it in Egyptian picture writing or Babylonian cuneiform signs. So it was natural that the Phoenicians, instead of trying to use such cumbersome writing, should have borrowed the simpler alphabet which their relatives had invented.

As we have seen, these Phoenicians were a trading people and had colonies in distant lands. It was they who first spread the alphabet far from its original home. Then many other peoples learned about the alphabet and began using it. The Phoenicians had only consonants in their alphabet. They did not write the

vowels, because they did not think they were really necessary. Vowels were not so important in their language as they are in ours. So they wrote in consonants only. The result was somewhat as if we wrote John Smith like this: jhn smth. They had only one set of letters, not capital letters and small letters, as we have.

*How did they  
use the alphabet?*

Other peoples living near the Phoenicians saw how much easier it was to write by using these simple little letters than by means of picture writing and sound-signs for words and syllables.

Among these other peoples who were neighbors and relatives of the Phoenicians were the ancient Hebrews. They lived in the country now known as Palestine. The Hebrews, after they began using the alphabet, gave the letters a square, boxlike shape. Many great books were written in the Hebrew letters. The most famous is the Old Testament, the first part of the Holy Bible.

The Phoenicians, when they began using

*How did the  
Hebrews write?*

their alphabet, wrote in long straight lines. Sometimes they wrote from the left side to the right as we do, and sometimes from the right side to the left. The Hebrews, when they started to use the alphabet, decided to write all the time from the right side to the left. The Jews still use the Hebrew alphabet. If you see a Hebrew book or newspaper, it will look as if the words were spelled backward, because the lines have to be read from right to left.

We are now beginning to get much closer to the alphabet that we use today, although the Hebrew letters do not look very much like ours.

Another interesting thing is the fact that each Hebrew letter had a real name. The letters were named for things that they seemed to look like, the names of which began with the various letters.

The names of the Hebrew letters, and the things that the names mean (we are not quite sure of two or three of the meanings), are as follows:

אבגדהוזחטיךכלםןסעפץצקך. Early Hebrew writing called Moabite

אבגדהוזחטיךכלםןסעפץצקך

Modern form of Hebrew



Aleph	Ox
Beth	House
Gimel	Camel
Daleth	Door
He	Window
Vau	Hook
Zayin	Weapons
Cheth	Fence
Teth	Serpent
Yod	Hand
Kaph	Palm of Hand
Lamed	Ox-goad
Mem	Waters
Nun	Fish
Samekh	Post
Ayin	Eye
Pe	Mouth
Tsade	Javelin
Qoph	Knot
Resh	Head
Shin	Teeth
Tau	Mark

*What are the  
names of the  
Hebrew letters?*

You will notice that the names of the first two letters, which became our A and B, were Aleph and Beth. After the Greeks took over the alphabet, they changed these names slightly. Then the two words, as we have already seen, were joined together to make our word *alphabet*. So that word really came from Ox-House.

## CHAPTER VI

### THE STORY OF THE GREEK ALPHABET

*Who were  
the Greeks?*

PHOENICIAN commerce soon made the Phoenician alphabet familiar to other peoples. The neighboring Greeks were becoming a great people and were looking for a good way of writing. Some of the Greeks lived in Greece itself, which, as you will see on a map, is a peninsula in the southeastern corner of Europe. But there were thousands of them living on the islands of the Aegean Sea and along the coast of Asia Minor.

The Greeks had come down from the north. They were a strong, hardy people. At first they did not have much need for writing. But as time went on they became more and more civilized. Finally they built up the finest civilization that the world had ever seen. The

Greeks who lived among the Aegean islands and in Asia Minor were close neighbors of the Phoenicians. What could be more natural than that those early Greeks should borrow the alphabet from the Phoenicians and try to use it for writing their own language?

*Did the Greeks  
borrow the  
Phoenician  
alphabet?*

Just when or where the Greeks began writing with the alphabet we do not know. According to a story that has come down to us from ancient times, a man named Cadmus, who founded the city of Thebes, in Greece, first brought the Phoenician letters to that country. But we cannot be sure that this story is true.

*When did they  
begin using it?*

In those days the Greek people were spreading out in many directions. Pretty soon they had towns scattered all over the shores of the Mediterranean Sea and even the Black Sea, from what is now southern Russia on the east to what is now southern France on the west. The Phoenicians also had towns scattered along those shores, and all of them were using different forms of the Phoenician alphabet.

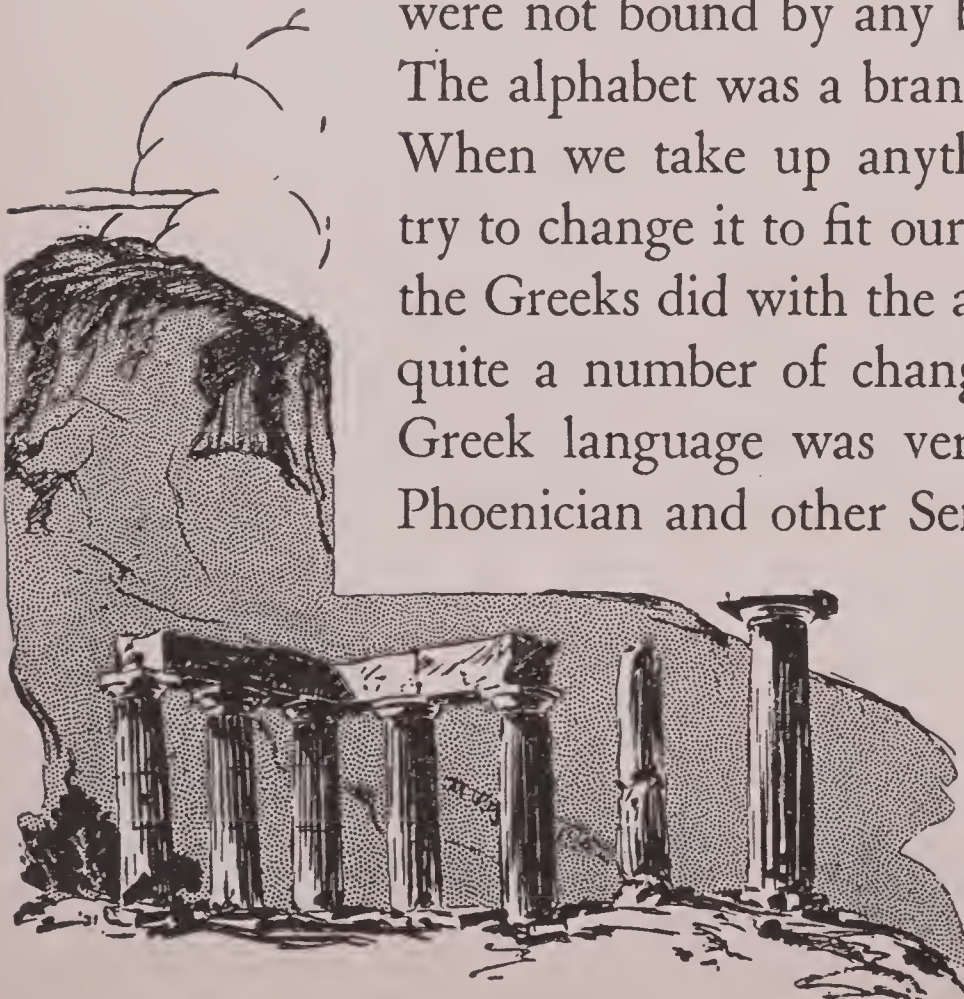


*Why did they use  
a number of  
alphabets?*

Thus the different Greek towns would borrow different kinds of alphabets, though they were all very much alike. So there were a number of different forms of the alphabet being used by the Greeks.

At first, the Greeks began writing from the right-hand side to the left-hand side, just as the people who write Hebrew still do. But after a while they decided that they would rather start at the left-hand side and go over to the right, just as we do today.

Now, as we have seen, the Greeks did not have any other real writing when they borrowed the alphabet from the Phoenicians. So they were not bound by any bad habits in writing. The alphabet was a brand new thing to them. When we take up anything that is new, we try to change it to fit our needs. That is what the Greeks did with the alphabet. They made quite a number of changes in it, because the Greek language was very different from the Phoenician and other Semitic languages.



*The Greeks also built  
beautiful temples which  
are now in ruins*

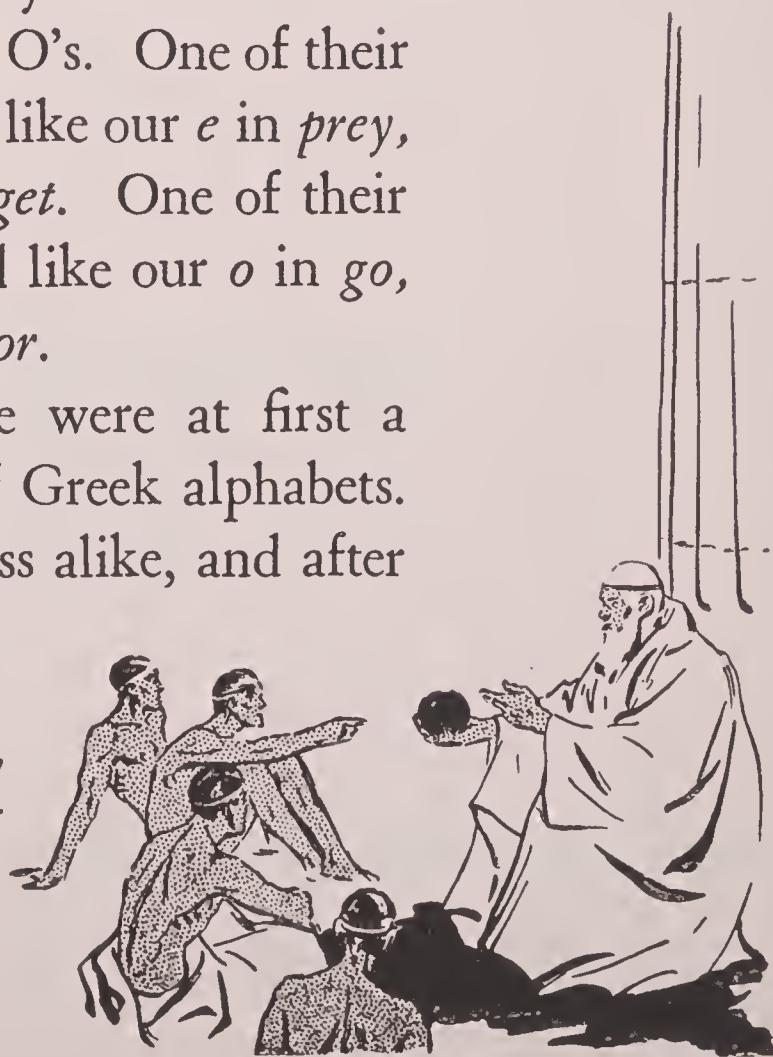
For instance, in the Greek language vowels were more important than they were in those other languages. The Greeks did not want to leave out the vowels when they wrote their language. But what should they do about it? Well, it happened that there were some consonants in the Semitic languages that the Greeks did not have in their language. So they took the letters that stood for those consonants and made them stand for vowels in the Greek language. They invented a few other letters and added them to the alphabet.

*How did the  
Greeks finally  
write?*

So the Greeks had a letter for A, a letter for I, a letter for U, and eventually letters for two kinds of E's and two kinds of O's. One of their letters for E was pronounced like our *e* in *prey*, and the other like our *e* in *get*. One of their letters for O was pronounced like our *o* in *go*, and the other like our *o* in *for*.

As we were saying, there were at first a number of different kinds of Greek alphabets. But they were all more or less alike, and after

*The Greeks were scholarly  
and eager to learn from their  
wise men*





*Was the same  
alphabet later  
used by all  
Greeks?*

a while, all the people who wrote Greek used the same kind of alphabet, just as all the people today who write English use the same kind of alphabet. The Greeks learned to use the same kind of alphabet everywhere, because they were now becoming a very civilized people. They had great poets and other writers, and many books were being written. The kind of alphabet with which these great books were written soon became the standard alphabet.

Many of the greatest books that the world has ever known were written in Greek. Among them were the poems of Homer and the works of great thinkers, whom we call philosophers, like Plato. The part of the Bible known as the New Testament, which tells about the life of Christ, also was written in Greek.

The Greek letters were very beautiful, for the Greeks loved beauty, and they wanted to make their letters handsome.

In the Greek alphabet, after it reached its final form, there were twenty-four letters, mak-

ΓΑΥΔΙΟΝ ΕΚΡΗΑΝΤΟ Δ  
ΕΚΜΑΛΤΟ ΔΑΜΕΝ ΓΗΕ

*A Greek inscription*



ing two more than there were in the Phoenician and Hebrew alphabets. Their names and the letters in our alphabet for which they stand are:

Alpha	A	Α
Beta	B	Β
Gamma	G	Γ
Delta	D	Δ
Epsilon	E (Short)	Ε
Zeta	Z	Ζ
Eta	E (Long)	Η
Theta	Th	Θ
Iota	I	Ι
Kappa	K	Κ
Lambda	L	Λ
Mu	M	Μ
Nu	N	Ν
Xi	X	Ξ
Omicron	O (Short)	Ο
Pi	P	Π
Rho	R	Ρ
Sigma	S	Σ
Tau	T	Τ
Upsilon	U	Υ
Phi	Ph	Φ
Chi	Ch	Χ
Psi	Ps	Ψ
Omega	O (Long)	Ω

*What are the names of the Greek letters?*

You will notice that although some of these letters look strange, more than half of them are familiar, such as A, B, E, I, K, M, N, O, T, Z.

*What happened  
to the Grecian  
alphabet?*

About 350 years before the birth of Christ a mighty king arose named Alexander the Great. He became the ruler of a great Greek empire which took in nearly all the known world. Greek towns and cities sprang up all through this vast empire. The Phoenicians had now dwindled away, and the Greeks took their place as the great trading people of the world. They carried the Greek alphabet with them wherever they went. After many years, the Greek alphabet was pushed out, by other alphabets, from most of the lands where it once flourished. But it is still used in Greece and among the near-by islands, and the letters look the same as they did 2,500 years ago.

*Why is our  
alphabet different  
from theirs?*

But why is not our alphabet more like the Greek alphabet than it is? The reason is that we did not get our alphabet directly from the Greeks. Another great people known as the Romans, who lived in Italy, took over an early form of the Greek alphabet and changed it. Our ancestors learned the alphabet from them.

## CHAPTER VII

### THE STORY OF THE ROMAN ALPHABET

**A**NOTHER great people, the Romans, soon saw how helpful it was to have an alphabet. So they borrowed the alphabet from others. And now, after many years, and with few changes, we are still using the one used in the old Roman Empire.

*Where did the Roman alphabet come from?*

The only changes that have taken place are, that we have added two or three letters by writing some of the Roman letters in more than one way, and we have added a set of small letters. The Romans used only capitals. But no entirely new letters have been invented since the days of the Romans.

That is the reason why the alphabet that we use is still known as the Roman alphabet. It is used not only by English-speaking people,



*How many people  
now use this  
alphabet?*

but by many other great peoples of the world today. It is the alphabet of the French, the Spaniards, the Italians, the Germans, the Hollanders, the Belgians, the Danes, the Swedes, the Norwegians, the Poles, and other peoples of Europe. Recently, even the people of Turkey have borrowed this alphabet and are now learning to write their language with it. And, of course, it is used all over North and South America, in Australia and New Zealand, in South Africa, and in many other places.

*Who were  
the Romans?*

Who were these Romans, the people who gave us the alphabet? If you will look at a map, you will find a city in Italy, on the river Tiber, called Rome. The city of Rome was built about 750 years before the birth of Christ. At that time, Egypt and Babylonia had been great civilized empires for hundreds of years.

The Romans belonged to the Latin race; the country around Rome was called Latium. These people had come down from the north, just like the Greeks. At first they led very

simple lives in little towns and on their farms, and so did not have much need for writing.

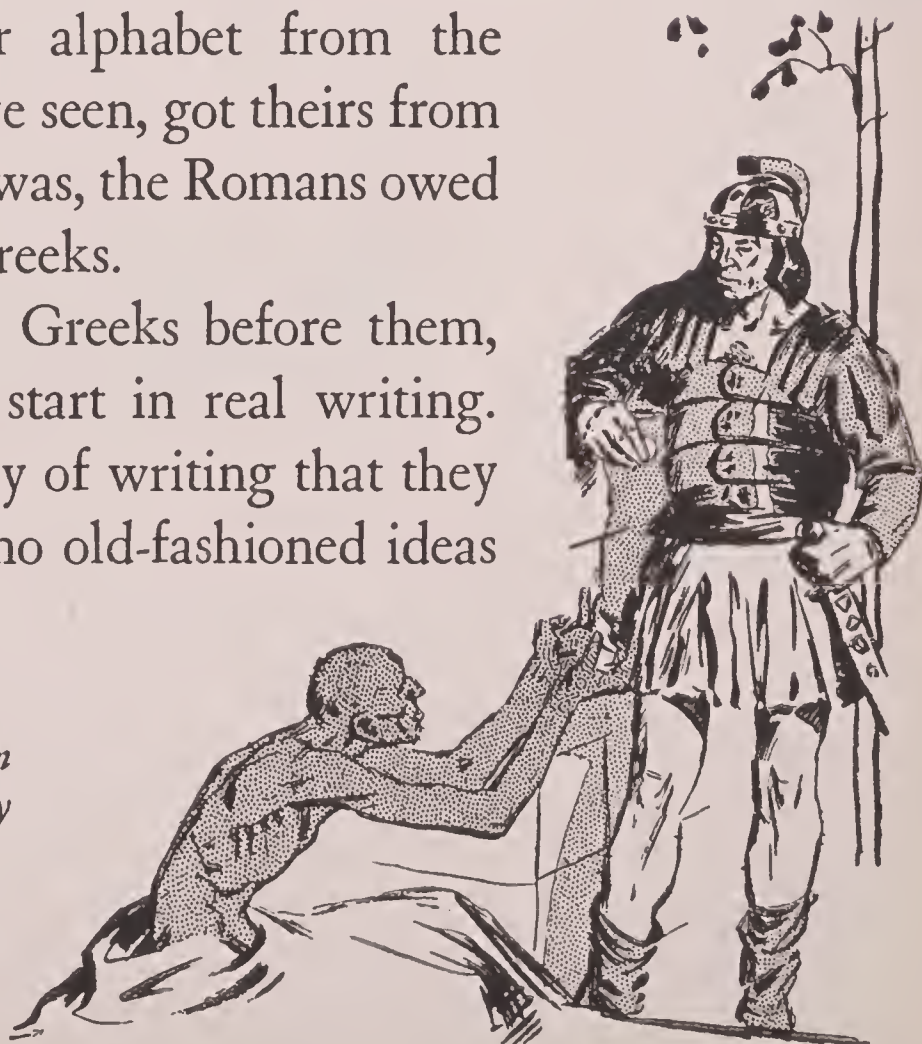
Now, there were many Greek towns in southern Italy, where the people were using the early Greek alphabets, while to the north of Rome there lived a very civilized people called the Etruscans who also had an alphabet which they had borrowed from the Greeks.

The men who have studied this subject are not sure just how the Romans got their alphabet. Some think that they borrowed it from a Western form of the Greek alphabet, which the Greeks had brought to southern Italy, where they had many towns. Others think that the Romans borrowed their alphabet from the Etruscans who, as we have seen, got theirs from the Greeks. However it was, the Romans owed their alphabet to the Greeks.

The Romans, like the Greeks before them, were making their first start in real writing. They wanted the best way of writing that they could get, and they had no old-fashioned ideas

*How did the  
Romans get  
their alphabet?*

*The Romans were victorious in  
their wars and conquered many  
lands*



about writing, like the Egyptians and the Babylonians, that held them back. They did not care how the Phoenicians and the Greeks had used the alphabet. So they made quite a number of changes in it.

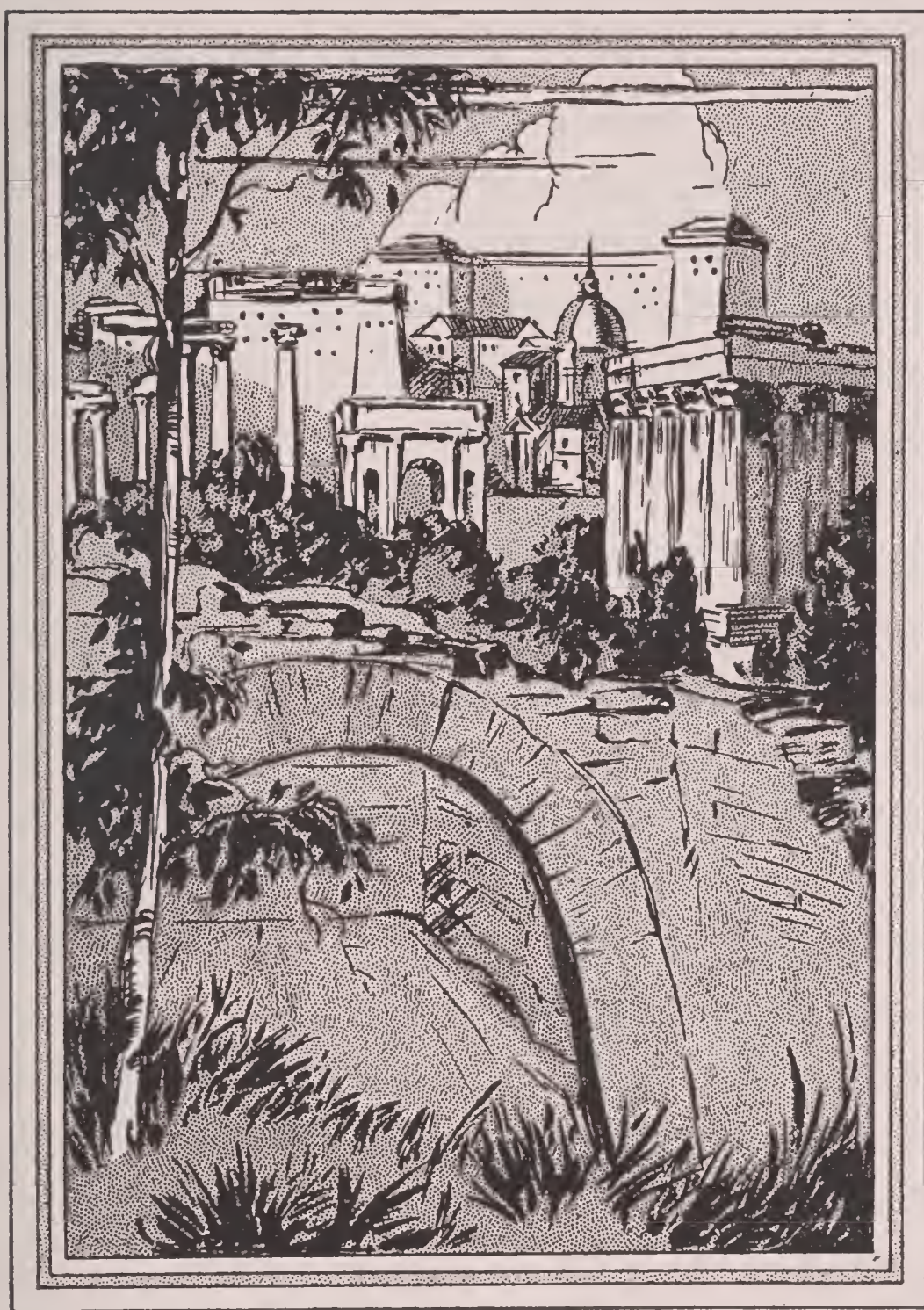
*How did they  
change the  
alphabet?*

We have seen how the Greeks made two different kinds of E's and O's. But in the Roman alphabet the letter H, which the Greeks finally made into long E, kept its original sound as a consonant. The Greeks at first pronounced the letter like that, just as did the Phoenicians. So today we pronounce it as in *Henry*, except when it is silent. The Romans did not add another kind of O.

Then there was in the Phoenician alphabet a letter like our Q. The Greeks had no use for it, and so they finally threw it out of their alphabet. But the Romans wanted that letter, and so they kept it in their alphabet. There was a sound in their language that this letter fitted.

There were two Greek letters the Romans did not want at first, but after several hundreds





*The city of Rome was built about 750 years before the  
birth of Christ*

*What characters  
did the Romans  
add?*

of years they decided to take them in. These were our Y and Z. As a matter of fact, they had already made their U out of the Greek Y. But they now wanted Y as well as Z to make it easier to spell some of the words they were borrowing from the Greek language. So they added these two letters.

The letter F was one that the Greeks took from the Phoenician alphabet. They used it for a while, but later they tired of it and stopped using it. So it was not in the Greek alphabet when that alphabet reached its final form. The Greeks had pronounced it about like our W. But the Romans took the letter into their alphabet, and so it has come down to us. They pronounced it just like our F. For that sound the Greeks had made another letter, called Phi, which looked like a circle with a straight line drawn through it. So the Romans left this letter out. But we spell words that come to us from the Greek, like *photograph*, with *ph* instead of with *f*.



One or two other Greek consonants were also left out by the Romans.

The letter K has had an interesting history. It was a letter of the Phoenician alphabet, which the Greeks took over, and which the Romans, in turn, placed in their alphabet. Now the third letter of the Greek alphabet had the sound of our letter G, like the *g* in *game*. The Romans changed the shape of the Greek letter to that of our letter C. It happened that the Etruscans pronounced the sound of C (as in *cat*) and of G (as in *game*) almost alike. So the Romans, who were greatly influenced by the Etruscans, used the letter C for both sounds. They used it in this way for a long time. As they did not need two letters for the same sound, they stopped using K almost entirely. After a long time, they began to separate the two sounds again. But instead of taking K back, they decided to use C for the K-sound. Then they took C, put a little bar on the lower part of it, and made it into the letter G. They

*What characters  
did they change?*



put the new letter G into the seventh place in the alphabet, where Z was in the Greek alphabet. You will remember that the Romans had thrown away Z at first. And that was why, still later, when they took Z back, they had to put it at the very end.

But the Romans did not completely forget K. They kept it in the spelling of a few names and things like that. It stayed in its old place in the alphabet, although very seldom used. So it has come down to us along with the other letters. We use it a great deal more than the Romans did. Although C has kept the sound of K, which the Romans gave it, it has come to be pronounced like S when it stands before E, I, and Y, as in *cent*, *civil*, *scythe*. So we use K before those vowels when we want to keep the consonant "hard," as in *keg*, *kitten*, *sky*. In many words we join C and K together, as in *tack* and *thicken*.

Our letter G usually has the sound that the Romans gave it when they made the letter, as

in our word *go*. But before E, I, and Y it is sometimes "soft," as in *gem*, *engine*, and *stingy*, and sometimes "hard," as in *get*, *give*, and *craggy*.

Although there have been no really new letters added to the alphabet since the time of the Romans, we have made some additional letters out of others by writing them in more than one way.

For instance, the letter J was once the same as I. Until about 300 years ago, the name *John* was written *Iohn*. Then a little curve was added to the bottom of the letter when it was used as a consonant, and we got the letter J. We now pronounce J like G in the name *George*, but in other languages it is pronounced like Y and other letters.

Then there was the letter V. The Romans pronounced it like our W when it was a consonant, and like our U when it was a vowel. During the Middle Ages it was pronounced as we pronounce V, when it was a consonant.

*Have we made  
any changes in  
the Roman  
alphabet?*

Two V's were sometimes written together, and called Double U, for U and V were still the same letter and both were called U. In English we pronounce W just as the Romans pronounced V. W is an important letter in all the languages of northern Europe, but it is not used in the languages of southern Europe, except in words and names taken from other languages. The letters U and V did not become entirely separate until about 300 years ago.

*Where did the  
Romans carry  
their alphabet?*

About the time of the birth of Christ, Rome had become so great and powerful that it ruled most of Europe and all the lands in Asia and Africa bordering on the Mediterranean Sea. Wherever the Romans went, they carried their alphabet with them. In the countries of the East, the Greek and other alphabets had so strong a foothold that the Roman alphabet could not drive them out. But in Western Europe it was used everywhere. When the Roman Empire fell, the alphabet lived on.



## CHAPTER VIII

### THE ALPHABETS OF ASIA, OCEANIA, AND AFRICA

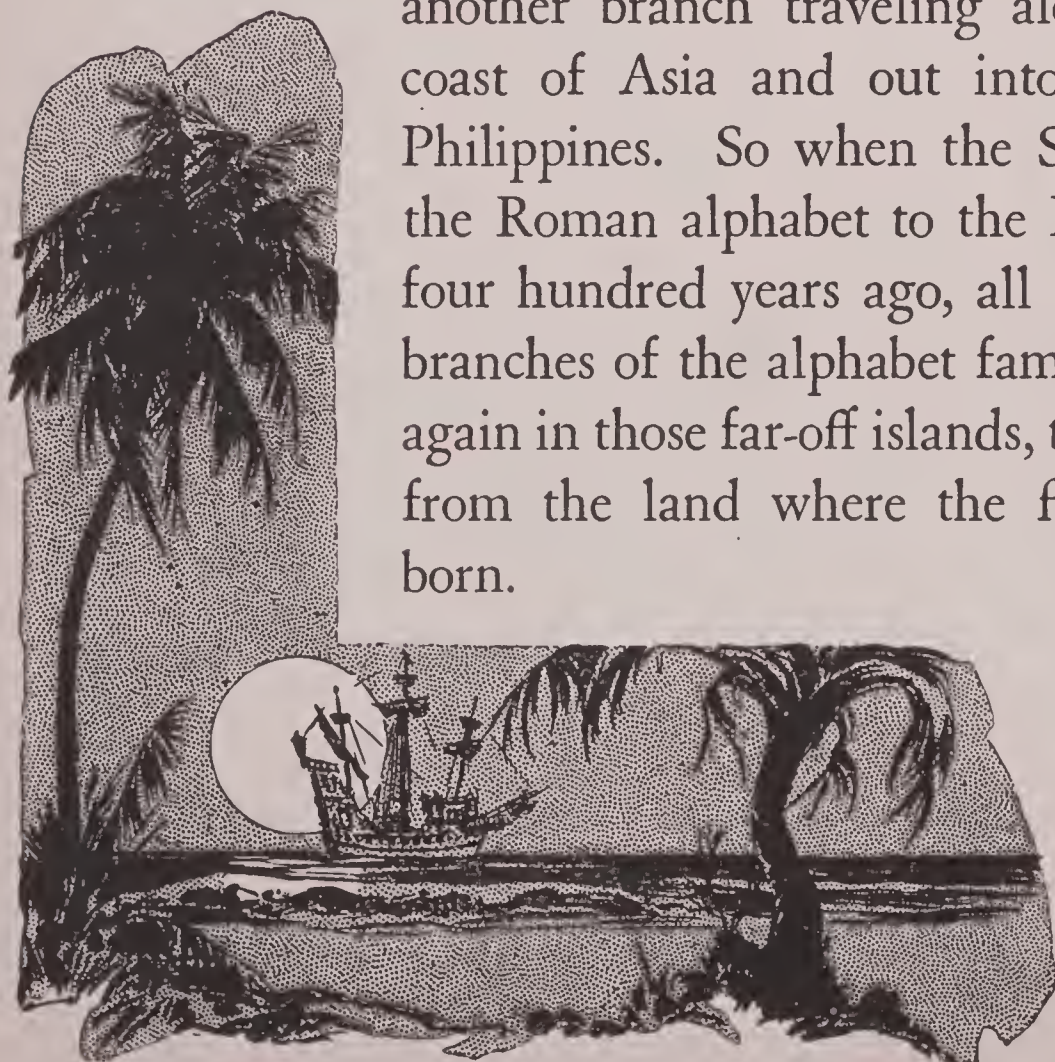
WE HAVE seen how, out of that little alphabet of the Phoenician trader, there grew the beautiful Greek alphabet and the great Roman alphabet which has come down to us almost unchanged.

But the Phoenician alphabet was the ancestor of many other alphabets, which, although the letters were often changed so that you would never think that some of them ever had anything to do with other alphabets, are really cousins of the alphabet that we use. The alphabet family, now scattered all over the world, is a very large one. Different branches of the family wandered all over Asia, out into many of the islands of Oceania, and down into Africa.

*Did the alphabet  
spread through  
many lands?*

*How did the  
alphabet travel?*

B In Western Asia there sprang up, at a very early time, two kinds of alphabets, both descended from the Phoenician letters. One of these alphabets spread out in a northeasterly direction across Asia, being greatly changed as it went, until it reached the Pacific Ocean. Another branch of the same alphabet went southwestward into Africa and a long time later crossed the Indian Ocean and went as far as the Philippine Islands. The other alphabet also divided into branches, one going across Asia until it, too, reached the Pacific Ocean, along a route south of the other alphabet; another branch traveling along the southern coast of Asia and out into Oceania to the Philippines. So when the Spaniards brought the Roman alphabet to the Philippines, about four hundred years ago, all three of the chief branches of the alphabet family came together again in those far-off islands, thousands of miles from the land where the first alphabet was born.



*The Spaniards brought  
the Roman alphabet to  
the Philippines four  
hundred years ago*

We have already seen that one of the earliest alphabets which came from the Phoenician alphabet was the Hebrew, with its square, box-like letters. Another early alphabet was that of the Arabs, who were relatives of the Phoenicians and of the Hebrews. But the Arabic letters were very different in shape from the Hebrew ones. Their letters were full of curves and graceful flourishes. The Arabs valued their writing for its beautiful looks about as much as for its meaning. Strangely enough, the alphabet that we use today—that is, the capital letters—looks more like the alphabet of those early Phoenician traders than does the Hebrew or the Arabic alphabet. The reason is that the Romans, like the Phoenicians, were a very busy people who valued writing for its meaning, and so they kept close to the simple forms.

But the Hebrews and the Arabs followed the Phoenicians more closely in one way. They did not use vowels; all their letters were con-

*What was  
another early  
alphabet?*



sonants. That was because their languages were very much like the Phoenician language, and the vowels were not thought to be very important. After a long time, however, the Hebrews and the Arabs decided that they should have vowels in their writing. But as they did not have any letters to spare, because their consonants were the same as the Phoenician consonants, they had to put little marks underneath the letters, like dots and dashes, to stand for vowels.

*Who carried the  
alphabet to India?*

As early as 500 years before Christ, merchants carried a Semitic alphabet to India. But the people of India were not Semitic. They spoke an Aryan language, of the same family as that to which the languages of the Greeks and the Romans belonged. Its name was Sanskrit. So the Hindus, like the Greeks and the Romans, had to make many changes in the alphabet so that it would fit their language. The changes that the Hindus made were much more cumbersome than those that the Greeks

and the Romans had made. They changed the shape of the letters so much and invented so many new letters that you would never imagine that the Hindu alphabet is a relative of ours. Unlike the Greeks and the Romans, they did not make separate letters for vowels. They did as the Hebrews and the Arabs did: they put little marks under the consonants to show the vowels in the words.

*What changes did the Hindus make?*

Now, at about this time a new religion was springing up in India, called Buddhism. The sacred books of this religion were written with the Hindu alphabet. When Buddhism spread into other countries, the Hindu alphabet went along with it and was borrowed by the peoples of those other countries. Each people changed the alphabet to suit their own needs. So it was that different forms of the Hindu alphabet came to be used in their writing by the peoples of Ceylon, Burma, Siam, Indo-China, Java, Sumatra, Borneo, Celebes, and some of the islands in the Philippines.

*How did the Hindu alphabet spread?*



*Who borrowed  
this alphabet?*

Another form of the Hindu alphabet spread northeastward across Asia, passing through all sorts of changes on the way. It was borrowed by a number of different peoples, such as those of Tibet and Korea, when they became Buddhists. Buddhism also entered China. But as we have seen, the Chinese for hundreds of years had had a different kind of writing of their own, something like the old Egyptian writing. They were so used to writing in the way of their forefathers, for whom they had very deep reverence, that they did not want to change their habits and try writing with an alphabet. So to this day the Chinese still write with their ancient picture-signs, idea-signs, and sound-signs, all mixed up.

*Into what other  
countries did the  
alphabet travel?*

Meanwhile, another kind of alphabet, very close in form to the ancient Phoenician, began to spread from Asia Minor through central Asia. It was carried onward by a group of Christians called the Nestorians, who were very powerful in Asia hundreds of years ago.



This alphabet, too, was taken up by different peoples and changed to suit their needs. It became the parent of alphabets such as the Uigur, the Mongolian, and the Manchu. The Manchus, who learned to write with one of the forms of this alphabet, live north of China in a country bordering on the Pacific Ocean.

There were several other alphabets in southwestern Asia, such as the Pehlevi in Persia, and the Armenian in the region of the Caucasus Mountains.

Then there was the alphabet used by the Arabs, at which we have already taken a glance. Arabia is the great sandy peninsula in the southwestern corner of Europe. When the Arabs first began using their alphabet, nobody could have dreamed that it had such a wonderful future ahead of it. But about 600 years after Christ, a man named Mohammed, who lived in Arabia, preached a new religion which was known as Mohammedanism, or Islam. The Mohammedans had

*Did the Arabs  
have an alphabet?*

a sacred book called the *Koran*, which was written, of course, with the Arabic alphabet.

*How did the  
Arabic alphabet  
spread?*

The Mohammedan religion soon began to spread into many other countries. Wherever it went, the Arabic alphabet went, too. So it happened that this alphabet came to be used in more lands than any other alphabet except the Roman. People wrote with the Arabic letters all over Asia Minor and in Persia. This alphabet was carried along the northern coast of Africa, from Egypt to Morocco. When the Arabs conquered Spain, this alphabet made itself at home there, too. It was used in Spain for hundreds of years, until the Christians drove out the Mohammedans. Since then, of course, the Roman alphabet has been the alphabet of Spain.

*Where did it go?*

Northeastward, the Arabic alphabet made its way into Turkestan. Southeastward, it made a long jump across the Indian Ocean, with the Mohammedan religion, and was soon being used in many of the islands of the East

Indies and by the Mohammedan part of the Philippine Islands.

When the Turks came down into Asia Minor, they, also, used the Arabic alphabet. Later, they conquered Constantinople and a great deal of southeastern Europe, including most of Greece, the countries now known as Jugoslavia, Bulgaria, and Roumania, and a large part of Hungary. But the Christian people who lived in those countries kept on using their own alphabets, and when they drove out the Turks the Arabic alphabet went.

*What great country used it?*

After Turkey became a republic, a few years ago, the President, a wise man named Mustapha Kemal, decided that the Arabic alphabet was too slow and awkward, and that the people of Turkey would make faster progress if they wrote their language with the Roman alphabet. So he issued an order that in the future all the people must stop using the Arabic alphabet and use the Roman alphabet instead. Today all the people of Turkey are

*Why was it changed?*



E learning their A, B, C,'s, just like little children in American schools.

*What are two alphabets used in Africa?*

There are two other very curious alphabets that found a home in Africa many hundreds of years ago. One of them, known as Coptic, was used by the Christian people of Egypt, the Copts. It has now gone out of use except in their sacred books. This alphabet is related to the Greek. The other alphabet, the Ethiopic, is the alphabet of Abyssinia, a Christian country in Africa south of Egypt.

Most of Africa is now ruled by European countries, such as England, France, Belgium, and Portugal. Of course, wherever people of European blood live in that great continent, they use the Roman alphabet.

The Roman alphabet is coming more and more to be the alphabet of the whole world.

## CHAPTER IX

### WRITING IN THE MIDDLE AGES

**F**OLLOWING the history of writing from the end of the Roman Empire to the beginning of modern times is most interesting. As we have already noticed, the Romans carried their alphabet with them into all the countries that they ruled. In some of these countries the people were using other alphabets, and they did not care to change. But in Western Europe all the different peoples began to use the Roman alphabet.

The Romans used for their ordinary writing wooden tablets covered with a coat of wax. They wrote by cutting the letters into this wax with a stylus, a pointed piece of metal shaped something like a pencil. Afterwards, the writing could be rubbed out and the tablet used over again. There was papyrus paper,

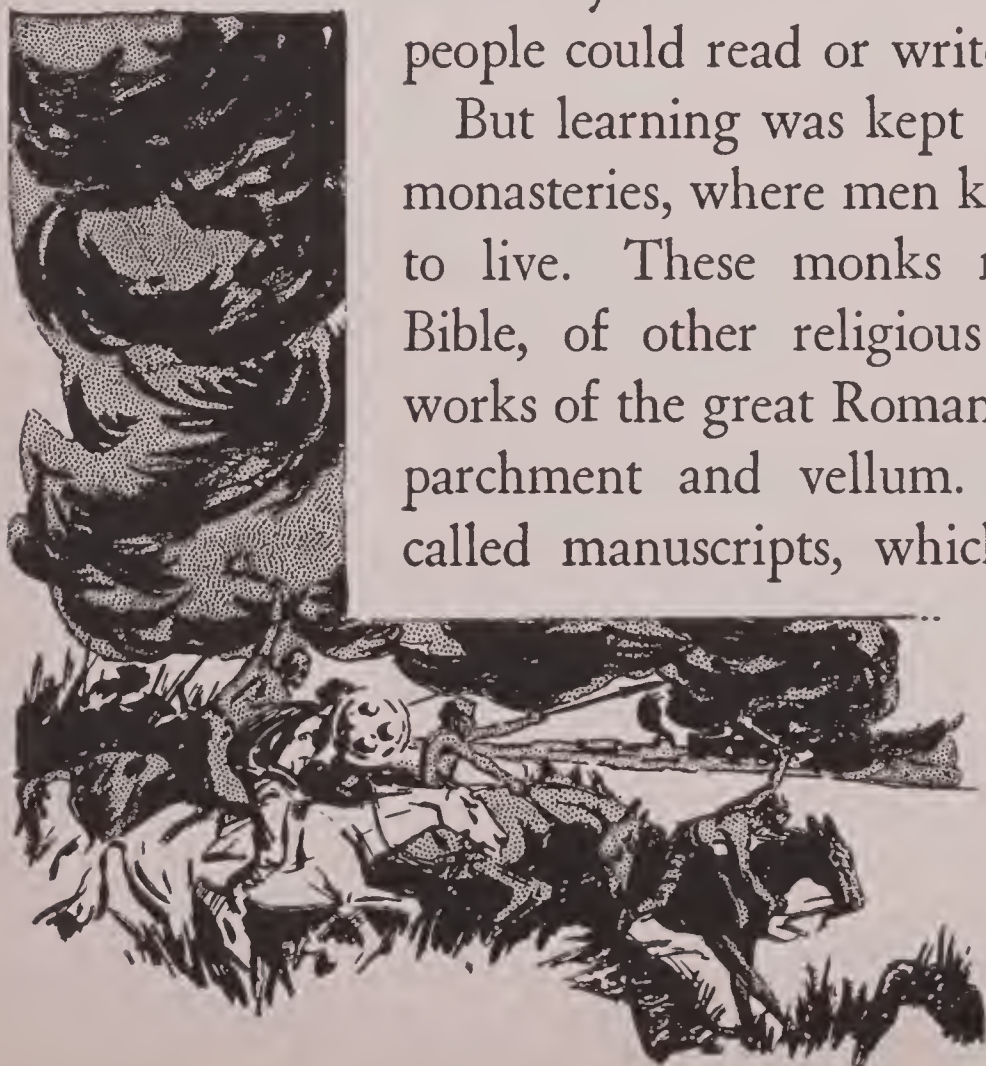
*What instruments  
did the Romans  
write with?*

*Did they  
use paper?*

brought from Egypt, but that was too expensive for common use. Then, too, there was finely polished skin, called parchment and vellum. This was used a great deal, at a later date, for important writing. We still use this skin paper, which is very beautiful but quite expensive, for college diplomas and things of that kind.

About 400 years after the time of Christ, thousands of rough men from the north swept down upon the Roman Empire. After a long struggle, that great empire fell. For many hundreds of years after that, wars were going on nearly all the time in Europe, and very few people could read or write at all.

But learning was kept alive in places called monasteries, where men known as monks used to live. These monks made copies of the Bible, of other religious books, and of the works of the great Roman writers. They used parchment and vellum. These books were called manuscripts, which means *written by*



*Thousands of rough men,  
from the north swept down  
upon the Roman Empire*



*hand*, but the pages were bound together and covers put on them, so that they looked a good deal like printed books.

Both capitals and small letters were used in writing these manuscripts. Where did the small letters come from? You will remember that the Romans used only capital letters. When the letters were carved on the stone walls of the temples and other public buildings, they were quite like our capital letters, each letter standing very straight. But when the Romans wrote on parchment and vellum they sloped the letters and changed the shape slightly. These were called *uncial* letters.

*Where did small  
letters come  
from?*

From these uncial letters there grew up, in Italy, a sort of writing in smaller letters, called semi-uncial, or minuscule. The forms of the letters were changed somewhat, so as to make them easier to write. This kind of writing was used for many centuries in Europe, during the Middle Ages. It gave us our small letters.

These small letters could be written much

*Why were  
small letters  
used?*

more quickly and easily than capitals. So the capital letters were kept only for the titles of chapters and the initial letters of paragraphs and sentences. The men who wrote the manuscripts were sometimes called *scribes*, which means writers. They made the manuscripts look very beautiful. They used to paint little pictures in the manuscripts, and they painted the capital letters in different colors, such as red and blue and gold. Sometimes the parchment also was colored. One of the most beautiful manuscripts of the Middle Ages, a Gothic Bible, is written with gold and silver letters on purple vellum.

*Who used  
different forms  
of letters?*

About the end of the twelfth century, the scribes began using a slightly different form of letters. This was called Black Letter, Gothic, or Old English. The letters were shaded so that they looked very black. We have all seen Old English, for it is still used sometimes. The names of some of our newspapers, for instance, are printed in Old English at the top

of the first page. It looks very artistic, but it is not so easy to read as the letters we now use.

We must go back now to see what changes were taking place in the alphabet itself, in England and in other countries of Europe, during the Middle Ages.

Long before the end of the Roman Empire, the people of Britain, who belonged to the Celtic race, learned how to write and were using the Roman alphabet. When the Empire began to break up, the Roman troops left England. Germanic tribes, such as the Angles and the Saxons, from the Continent of Europe poured into England and divided up the country among themselves. They were fierce, warlike people, who had little use for writing. But when missionaries from Italy converted the Anglo-Saxons to Christianity, those who learned to write used the Roman alphabet.

*Who were the  
Angles and  
Saxons?*

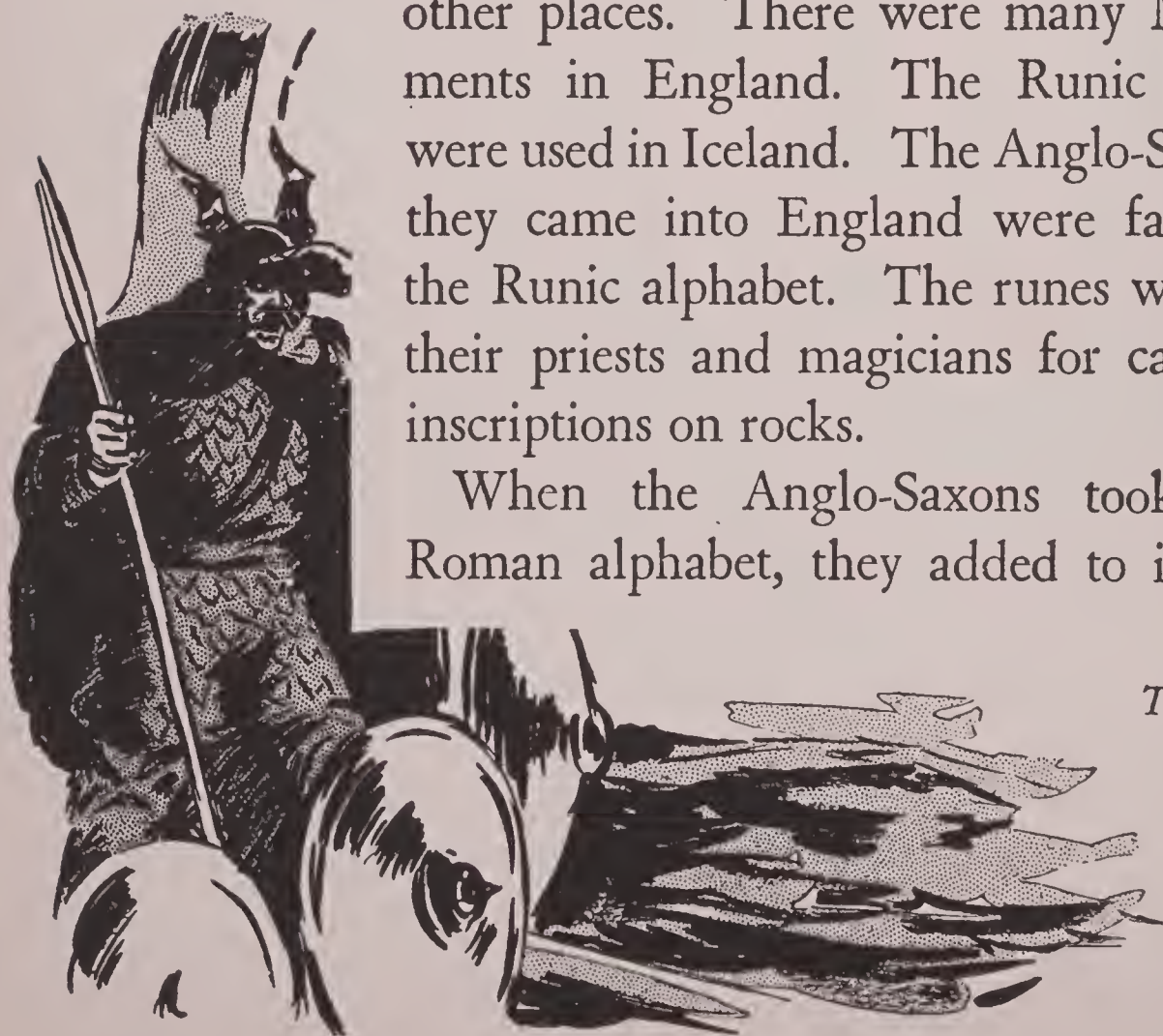
When the people whom we call the Anglo-Saxons came into England, they borrowed the Celtic form of the Roman alphabet.



*Where did the  
Runic alphabet  
come from?*

Meanwhile, there was a strange-looking alphabet, very different from the Roman, which had spread through northern Europe. This was the Runic alphabet. It is almost forgotten today, because nobody has written with it for many hundreds of years. This queer alphabet probably sprang from the Greek alphabet and was carried northward by Gothic traders who made their way from Constantinople along the Russian rivers. Others think that it may be a very crude form of the Roman alphabet. It was used chiefly in Scandinavia and by the Norsemen who went to live in other places. There were many Norse settlements in England. The Runic letters also were used in Iceland. The Anglo-Saxons when they came into England were familiar with the Runic alphabet. The runes were used by their priests and magicians for carving short inscriptions on rocks.

When the Anglo-Saxons took over the Roman alphabet, they added to it two extra



*The Norsemen  
were hardy  
sailors*

letters borrowed from the Runic alphabet. These two letters were named Wen and Thorn. They looked very much alike, being shaped something like a small *p*. One was pronounced like our W and the other the same as our Th.

*Did the Anglo-Saxons make use of all twenty-six letters?*

The Anglo-Saxons did not have the letters K, Q, or Z in their alphabet. The letter C was always pronounced "hard," as in *cat*, never "soft," as in *cent*. The letter G, also, was always pronounced "hard," as in *get*.

There was another alphabet, still stranger than the Runic, which was used by some people, in England and more in Ireland but it quickly died out. This was known as the Ogam alphabet. The letters looked very much like the shorthand of our day. They were upright or slanting strokes drawn above, below, or right through a straight line.

When the Normans came over from northern France and conquered England, about 900 years ago, they brought with them the regular Roman alphabet, which the people

*Who brought the regular Roman alphabet to England?*

*Did the English  
then use it?*

of France and other countries of southern and western Europe had been using right along since the days of the Roman Empire. After a while the scribes in England forgot the old Anglo-Saxon alphabet and began to use the Roman alphabet in much the same form as we have it today.

But the Normans had different ways of pronouncing some of the letters. They pronounced C like S, and G like J, when they came before the vowels E, I, and Y. We have already noticed the two ways of pronouncing C and G in the English language today. As we were just saying, the Anglo-Saxons did not use K in their alphabet, because C always had the same sound as K. But after the coming of the Normans, it was necessary to put K back into the alphabet in order to write words like *kettle*. But there was no extra letter that could be used in order to show the different sounds of the letter G, as in *get* and *gem*. In words that come to us from the Anglo-Saxon



*Castles and strongholds were built by  
the Normans*



language, G is always “hard,” but in words that come to us from the French language it is “hard” when it comes before A, O, and U, and “soft” when it comes before E, I, and Y.

Some English words, you see, come to us from the Anglo-Saxon and some from the French. Many of these French words, in turn, came first from the Latin. We have also borrowed hundreds of words from the Greek and other languages. That makes the English language very rich in words. But it causes trouble with our spelling. Some of these words borrowed from other languages we continue to spell as they were spelled in those other languages, though we have changed the pronunciation. That is why so many English words are not spelled just as they sound, and so when we go to school we have to spend a lot of time learning how to spell words.

Most other peoples that use the Roman alphabet spell every word just as it sounds, each letter always having the same sound

*From where do  
our English  
words come?*

*Why are they  
not all spelled  
as they sound?*

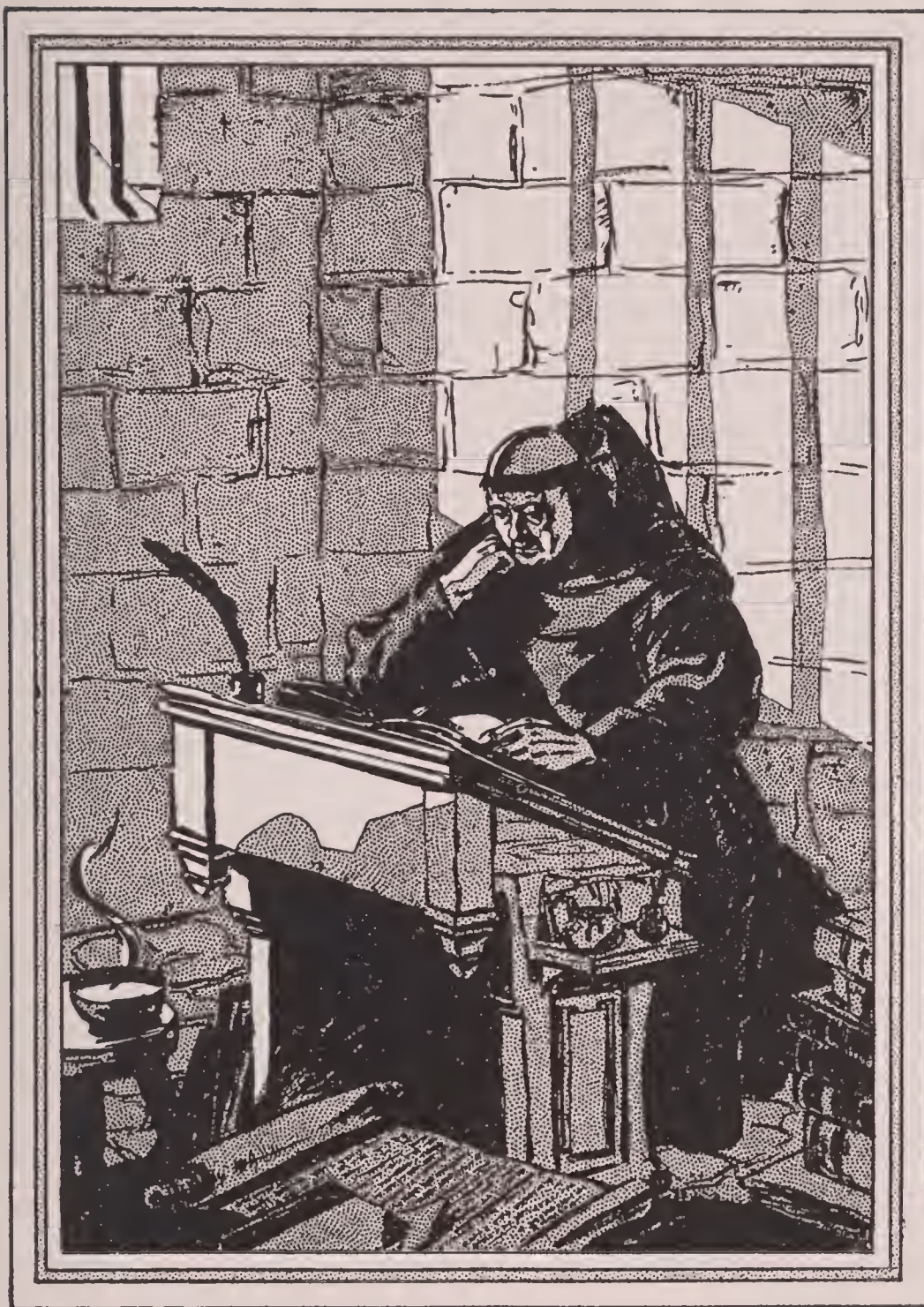
whenever it is written. That makes it ever so much easier to learn how to spell. In English we have many words that are spelled very much alike but pronounced differently, such as *laughter* and *slaughter*, while other words are pronounced very much alike but spelled differently, such as *receive* and *believe*. This makes it very hard for foreigners to learn to write and pronounce English correctly. Still, it is much easier to spell English words today than it was hundreds of years ago, when the word *fish* was spelled *fysshe*.

*How many letters  
do the Italians  
use?*

We use twenty-six letters in our alphabet, but other peoples who use the Roman alphabet get along with fewer. The Italians, for instance, find twenty-two letters enough.

In Russia (including the parts of Siberia where Russian people live) and in the countries of southeastern Europe in the region of the Balkan Mountains (Jugoslavia and Bulgaria) the Roman alphabet is not used. The people there write with a cumbersome alphabet of





*Monks would sometimes spend years carefully writing  
their books in longhand*



*What is the  
Cyrillic alphabet?*

thirty-six letters, which look very strange to us. This is called the Cyrillic alphabet. It was invented during the Middle Ages, and it came from the Greek alphabet. In Greece the people still use the alphabet of their forefathers. There are now small letters as well as capitals in the Greek alphabet. The small letters were developed by the scribes in the Middle Ages.

So far, we have not said anything about our numbers—the figures 0 to 9. While they are not, strictly speaking, a part of the alphabet, we use them all the time in our writing, and of course we could not do our arithmetic without them.

Neither the Greeks nor the Romans had figures for numbers. They used certain letters of the alphabet in the place of figures. We still sometimes use Roman numbers. Probably you have seen them carved on the corner-stones of buildings or used in the numbering of chapters in books. I stands for 1, V stands for 5, X stands for 10, L stands for 50, C stands for 100, and so

on. This was a very awkward way of writing figures. For instance, to write 38 you must use seven letters: XXXVIII.

The numbers that we use today are called Arabic numerals. But they really came first from India. They are very old. Some of them we can trace back before the time of Christ.

*Who gave us  
our numerals?*

One of these numbers is a very curious and very important one. It is the figure 0, which we call zero. It was not invented until a long time after the other numbers. Although the figure 0 stands for nothing, it means a great deal to us in arithmetic.

We simply could not get along today without the Arabic numbers, because without them it would be impossible for us to add and subtract, and to multiply and divide, quickly and easily. In fact, we could not do very difficult sums at all. Just think of trying to multiply CCCXXI by LXVII (331 by 67)!

*Are they  
important to us?*

The Hindu figures were brought to Europe during the Middle Ages by the Arabs. That

is why we call them Arabic numbers or numerals. The first country of Europe where they were used was Spain, a land that was ruled by the Arabs at that time.

*Is the numeral  
system universal?*

These figures are now used all over the world, by peoples speaking all sorts of different languages and even using very different forms of the alphabet. The figure 9 for instance, means just the same thing to an Englishman as to an Italian, although the word *nine* is different in each language.

During the Middle Ages punctuation marks began to be used. Punctuation marks, such as periods and commas, help to make clear the meaning of that which we write.

It was not until after the invention of printing that handwritten letters became different from letters that came to be used in print. In modern handwriting the letters are made rounder and are joined together so that we can write more easily and rapidly, without lifting the pen from the paper except between words.



## CHAPTER X

### THE COMING OF THE PRINTING PRESS

**B**UT it was not enough for the world to know how to write by hand. We could not have newspapers and magazines and books for everybody until the world learned how to make thousands of copies of a manuscript.

Now, we know that the Chinese knew how to print as long ago as before the birth of Christ. But printing in Chinese was very slow and expensive work. You remember there is no Chinese alphabet. There are about 40,000 different signs, one for each word. For a long time the Chinese used to carve wooden blocks for a whole page, but finally they began to make movable types; that is, a separate piece of type for each word. But even this was awkward. Think of having to keep on hand a supply of

*Did the Chinese  
find printing  
easy?*

each of the 40,000 types, and then searching among them for the right ones!

*How is printing  
done?*

It was only when people who used a real alphabet learned how to print that they could get the most profit from the invention. You simply carve out of wood or metal a supply of each of the letters of the alphabet. Some must be carved backward, so that when ink is spread over them and they are pressed against a sheet of paper, the marks left on the paper will be shaped properly. For instance, B must be carved backward in making the type, because the two sides are not alike.

Also, in setting up lines of type so as to make words or sentences, of course you always have to go from right to left, so that when the page is printed on paper the lines will go from left to right and we can read them.

When people who had an alphabet began to use printing, they could make so many copies of books quickly and cheaply that thousands of persons could afford to buy them.

The Greeks and the Romans had many great writers. Why in the world did they not learn how to print books? They already had a sort of idea of printing, because they had seals, with which they could make copies of pictures and designs in soft wax. And they had coins stamped with pictures and words.

But only a few of the Greeks and the Romans had time for reading, anyway. Most of the people had to work very hard all day. The few rich people who had time to read could afford to buy handwritten books. And even if printing had been known, there was no cheap paper to print books on. Papyrus and parchment and vellum were very expensive, and they were not suitable for printing.

So before it would be really worth while to print books, certain things would be necessary. First, there would have to be thousands of people who could read and who wanted books. Second, they must have time for reading. Third, they must be able to pay a reasonable price for

*Why was not  
printing done  
in Greece and  
Rome?*



books. Fourth, there would have to be a kind of paper that did not cost very much.

*Did people buy books during the Middle Ages?*

During the Middle Ages most of the people were very poor, scarcely anybody could read or write, and there were wars going on nearly all the time. But about 500 years ago things began to get better. There were not so many wars. Trade and commerce brought more and more wealth to the leading countries. More people were learning how to read and write. Thousands wanted books, for they had time to read them and they were willing to pay a reasonable price for them.

*How was paper made?*

Now, it happened that not long before this a way had been found for making paper out of cheap things, especially out of old rags. Old rags, which were so worthless that they could be had almost for nothing, made very fine, strong, white paper after they were cleaned.

It was the Chinese, again, who first learned how to make real paper. The papyrus paper used by the Egyptians was not real paper. It

was just strips of the papyrus plant laid cross-wise upon each other and stuck together. In making real paper different kinds of fiber are beaten into a pulp and pressed together.

Over one hundred years before Christ, the Chinese had learned how to make paper out of small branches of the mulberry tree, certain kinds of bark, bamboo, leaves, and similar things. From China a knowledge of how to make paper was carried to Persia and Arabia, probably by traders, about 600 years after Christ.

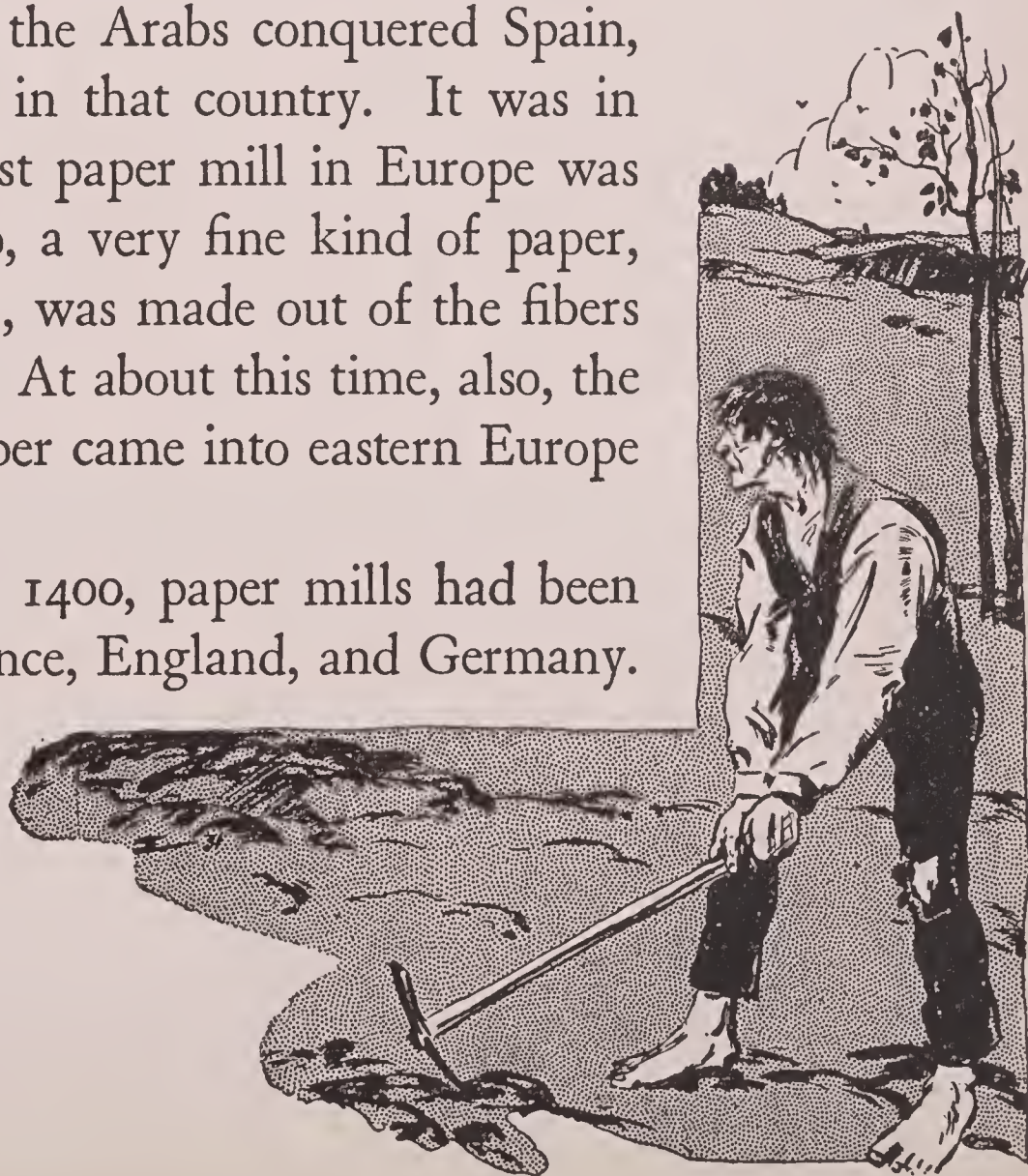
The Arabs soon began to make paper, using old rags. When the Arabs conquered Spain, they made paper in that country. It was in Spain that the first paper mill in Europe was built. There, too, a very fine kind of paper, called linen paper, was made out of the fibers of the flax plant. At about this time, also, the art of making paper came into eastern Europe from Damascus.

Before the year 1400, paper mills had been built in Italy, France, England, and Germany.

*How did the Chinese make paper?*

*Where was the first paper mill built in Europe?*

*People were poor and scarcely any could read*





That was long before the discovery of America. Paper was not made in America until the year 1690, when a man named Rittenhouse built a paper mill in Germantown, Pennsylvania.

*When did people  
become interested  
in books?*

It was soon after paper began to be made in all the chief countries of Europe that people began to be greatly interested in books, especially the works of the great Greek and Roman writers. And, as we have seen, they had money to buy them with, and time for reading them. Of course, printing just had to be invented.

We are not quite sure when or where printing first appeared in Europe. Some think that the knowledge of printing was brought to Europe from China by the Mongols. These people, during the Middle Ages, conquered all the lands from China to Russia, and even Poland and part of Germany.

But long before books began to be printed, the scribes who copied manuscripts were printing, with wooden blocks, beautiful initial letters, which could be used over and over again. And



people were learning how to stamp trademarks, playing cards, designs for cloth, and pictures.

It is said that about the year 1420, a man named Laurens Coster, of Haarlem, a city in Holland, was making movable types and printing books. By movable types we mean types that can be put together for printing a book and then taken apart and used over again. But it is not likely that Coster actually had a printing press; none of his books exist.

Anyway, by about 1438 a man named Johannes Gutenberg, who lived in Strasbourg, a city on the river Rhine, had a printing press and was beginning to print books from movable type. Some time later, he moved his printing press to Mayence, another city on the Rhine. One of the first books he printed was the Bible.

*Who was  
Johannes  
Gutenberg?*

Soon there were printing presses in other countries of Europe. In 1474, a man named William Caxton began printing books at Westminster, near London. His was the first English printing press. The first printing press in

the New World was set up in the City of Mexico as early as 1544. The first one in what is now the United States was established at Harvard College, near Boston, in 1639.

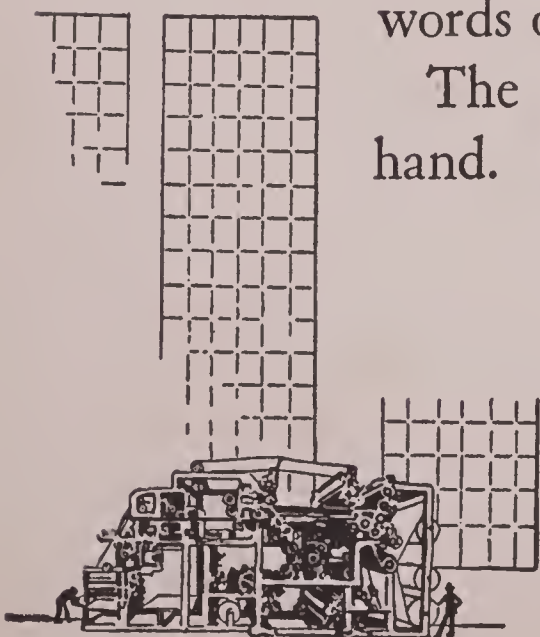
*Why was it necessary to make type in both capitals and small letters?*

At first, all books were printed in the Gothic or Old English type, often called Black Letter. But to read a whole book printed in this type was very slow work and hard on the reader's eyes. People wanted a type that was easier to read. So after a while very much simpler forms of letters were made, both capitals and small letters. This new type was then used in printing books in France, England, and other countries. In Germany, however, the old Black Letter type continued to be used.

*Where was italic type invented?*

Another kind of type that was invented was called *italic*, because it came from a kind of handwriting used in Italy. Italic type is still used a good deal, especially for printing certain words or sentences that we want to stand out.

The first printing presses were worked by hand. The type was kept in little boxes. In



*The modern printing press is a great change from the old*

setting up the type for a book, each letter had to be picked out of the box and fitted in with the others. Then the pages were printed by pressing down a large plate of type, over which ink had been spread, on sheets of paper. This was slow work but much faster than if each copy had to be written out by hand.

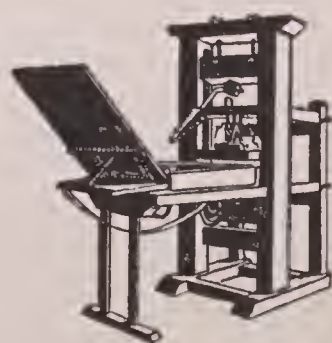
Books were made in that way until man learned how to make steam and electricity do his work. Now we have great printing presses driven by machinery that can be operated ever so much faster than the old kind of printing presses. So books, magazines, and newspapers can now be printed very quickly and cheaply.

We also have machines that set up the type, which formerly had to be set by hand.

Then, too, we have typewriters, on which we can write letters and other things that do not need to be printed much more quickly than we can write with pen or pencil. Typewriters first came into use about fifty years ago. Now there are millions of them.

*What has modern machinery done for printing?*

*Only a few years ago books were printed on these presses*





*Where did  
quills come  
from?*

But we still do a good deal of writing by hand. In the old days, the only pens that people had were quills. These were the feathers of certain birds, such as the goose. The blunt end was sharpened and the point was then slit with a knife. A person wrote by taking one of these quills and dipping its sharp end in ink. Later came steel pen points; these were fastened into wooden holders. Now we have fountain pens.

There are times when we like to write with pencils. We call them lead pencils because at first they were really pieces of lead, with which one could make marks on paper. But now our pencils are made of graphite, a kind of carbon.

*Would the early  
Phoenicians be  
surprised at our  
progress?*

So today we have many different ways of writing, but we still use the same old alphabet. Just think how surprised those old Phoenician traders who first spread the alphabet would be if they could come back to earth and see how we are using the alphabet in our writing and printing, with fountain pens, typewriters, and printing presses driven by electricity!

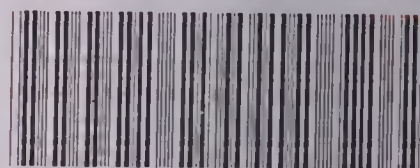






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